

**THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF TEXAS
MARSHALL DIVISION**

BARKAN WIRELESS IP HOLDINGS,	§	
L.P.,	§	
	§	
Plaintiff,	§	Case No. 2:18-CV-28-JRG
	§	
v.	§	
	§	
SAMSUNG ELECTRONICS CO., LTD.,	§	
ET AL,	§	
	§	
Defendants.	§	

CLAIM CONSTRUCTION
MEMORANDUM AND ORDER

Before the Court is the Opening Claim Construction Brief (Dkt. No. 71) filed by Plaintiff Barkan Wireless IP Holdings, L.P. (“Plaintiff”). Also before the Court are Defendants Samsung Electronics Co., Ltd., Samsung Electronics America, Inc., and Cellco Partnership d/b/a Verizon Wireless’s (“Defendants’”) Responsive Claim Construction Brief (Dkt. No. 80), Plaintiffs’ reply (Dkt. No. 85), and Defendants’ sur-reply (Dkt. No. 89). Further before the Court are Defendants’ Notice of Supplemental Evidence (Dkt. No. 87), Defendants’ Second Notice of Supplemental Evidence (Dkt. No. 97), and Plaintiff’s Notice of Supplemental Evidence (Dkt. No. 98).

The Court held a claim construction hearing on January 29, 2019.

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I. BACKGROUND

Plaintiff brings suit alleging infringement of United States Patents No. 8,014,284 (“the ’284 Patent”), 8,559,312 (“the ’312 Patent”), and 9,392,638 (“the ’638 Patent”). (*See* Dkt. No. 71, Exs. A–C.) The ’284 Patent, titled “Cellular Network System and Method,” issued on September 6, 2011, and bears an earliest priority date of August 12, 1999. The Abstract of the ’284 Patent states:

In a cellular network system, an add-on base station comprising: A. a first channel for connecting to a customer’s phone; B. a second channel for connecting to a network; C. circuits for connecting the customer’s phone to a destination on the network; and D. billing means for collecting a payment for services related to connecting the customer’s phone to the network. The customer’s phone may be connected through a wireless link. A method to establish a link between a caller and an addressee comprising the steps of: A. The caller sends a request to a cellular center requesting to connect to a specific addressee, using a message encrypted with the public key of the center; B. the center decrypts the message, identifies the caller and the addressee; C. the center composes a message for the addressee and encrypts it with the public key of the addressee. The message is then sent to base stations; D. the base station transmits the message “as is” or in a modified form; E. only the designated addressee will be capable to decrypt the message, and will be thus notified of the attempted connection.

The ’312 Patent, titled “Systems, Devices and Methods for Providing Access to a Distributed Network,” issued on October 15, 2013, and resulted from a continuation of the ’284 Patent. The ’638 Patent, in turn, issued on July 12, 2016. The ’638 Patent is a continuation of the ’312 Patent and bears the same title. Plaintiff submits that the patents-in-suit “share a common specification.” (Dkt. No. 70, at 1.)¹

Shortly before the start of the January 29, 2019 hearing, the Court provided the parties with preliminary constructions with the aim of focusing the parties’ arguments and facilitating discussion. Those preliminary constructions are noted below within the discussion for each term.

¹ These three patents-in-suit do not all contain identical Figures. Nonetheless, the parties have not pointed out any relevant differences in the specifications.

II. LEGAL PRINCIPLES

It is understood that “[a] claim in a patent provides the metes and bounds of the right which the patent confers on the patentee to exclude others from making, using or selling the protected invention.” *Burke, Inc. v. Bruno Indep. Living Aids, Inc.*, 183 F.3d 1334, 1340 (Fed. Cir. 1999). Claim construction is clearly an issue of law for the court to decide. *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 970–71 (Fed. Cir. 1995) (en banc), *aff’d*, 517 U.S. 370 (1996).

“In some cases, however, the district court will need to look beyond the patent’s intrinsic evidence and to consult extrinsic evidence in order to understand, for example, the background science or the meaning of a term in the relevant art during the relevant time period.” *Teva Pharms. USA, Inc. v. Sandoz, Inc.*, 135 S. Ct. 831, 841 (2015) (citation omitted). “In cases where those subsidiary facts are in dispute, courts will need to make subsidiary factual findings about that extrinsic evidence. These are the ‘evidentiary underpinnings’ of claim construction that we discussed in *Markman*, and this subsidiary factfinding must be reviewed for clear error on appeal.” *Id.* (citing 517 U.S. 370).

To ascertain the meaning of claims, courts look to three primary sources: the claims, the specification, and the prosecution history. *Markman*, 52 F.3d at 979. The specification must contain a written description of the invention that enables one of ordinary skill in the art to make and use the invention. *Id.* A patent’s claims must be read in view of the specification, of which they are a part. *Id.* For claim construction purposes, the description may act as a sort of dictionary, which explains the invention and may define terms used in the claims. *Id.* “One purpose for examining the specification is to determine if the patentee has limited the scope of the claims.” *Watts v. XL Sys., Inc.*, 232 F.3d 877, 882 (Fed. Cir. 2000).

Nonetheless, it is the function of the claims, not the specification, to set forth the limits of the patentee's invention. Otherwise, there would be no need for claims. *SRI Int'l v. Matsushita Elec. Corp.*, 775 F.2d 1107, 1121 (Fed. Cir. 1985) (en banc). The patentee is free to be his own lexicographer, but any special definition given to a word must be clearly set forth in the specification. *Intellicall, Inc. v. Phonometrics, Inc.*, 952 F.2d 1384, 1388 (Fed. Cir. 1992). Although the specification may indicate that certain embodiments are preferred, particular embodiments appearing in the specification will not be read into the claims when the claim language is broader than the embodiments. *Electro Med. Sys., S.A. v. Cooper Life Sciences, Inc.*, 34 F.3d 1048, 1054 (Fed. Cir. 1994).

This Court's claim construction analysis is substantially guided by the Federal Circuit's decision in *Phillips v. AWH Corporation*, 415 F.3d 1303 (Fed. Cir. 2005) (en banc). In *Phillips*, the court set forth several guideposts that courts should follow when construing claims. In particular, the court reiterated that "the claims of a patent define the invention to which the patentee is entitled the right to exclude." *Id.* at 1312 (quoting *Innova/Pure Water, Inc. v. Safari Water Filtration Sys., Inc.*, 381 F.3d 1111, 1115 (Fed. Cir. 2004)). To that end, the words used in a claim are generally given their ordinary and customary meaning. *Id.* The ordinary and customary meaning of a claim term "is the meaning that the term would have to a person of ordinary skill in the art in question at the time of the invention, i.e., as of the effective filing date of the patent application." *Id.* at 1313. This principle of patent law flows naturally from the recognition that inventors are usually persons who are skilled in the field of the invention and that patents are addressed to, and intended to be read by, others skilled in the particular art. *Id.*

Despite the importance of claim terms, *Phillips* made clear that "the person of ordinary skill in the art is deemed to read the claim term not only in the context of the particular claim in

which the disputed term appears, but in the context of the entire patent, including the specification.” *Id.* Although the claims themselves may provide guidance as to the meaning of particular terms, those terms are part of “a fully integrated written instrument.” *Id.* at 1315 (quoting *Markman*, 52 F.3d at 978). Thus, the *Phillips* court emphasized the specification as being the primary basis for construing the claims. *Id.* at 1314–17. As the Supreme Court stated long ago, “in case of doubt or ambiguity it is proper in all cases to refer back to the descriptive portions of the specification to aid in solving the doubt or in ascertaining the true intent and meaning of the language employed in the claims.” *Bates v. Coe*, 98 U.S. 31, 38 (1878). In addressing the role of the specification, the *Phillips* court quoted with approval its earlier observations from *Renishaw PLC v. Marposs Societa’ per Azioni*, 158 F.3d 1243, 1250 (Fed. Cir. 1998):

Ultimately, the interpretation to be given a term can only be determined and confirmed with a full understanding of what the inventors actually invented and intended to envelop with the claim. The construction that stays true to the claim language and most naturally aligns with the patent’s description of the invention will be, in the end, the correct construction.

Phillips, 415 F.3d at 1316. Consequently, *Phillips* emphasized the important role the specification plays in the claim construction process.

The prosecution history also continues to play an important role in claim interpretation. Like the specification, the prosecution history helps to demonstrate how the inventor and the United States Patent and Trademark Office (“PTO”) understood the patent. *Id.* at 1317. Because the file history, however, “represents an ongoing negotiation between the PTO and the applicant,” it may lack the clarity of the specification and thus be less useful in claim construction proceedings. *Id.* Nevertheless, the prosecution history is intrinsic evidence that is relevant to the determination of how the inventor understood the invention and whether the inventor limited the invention during prosecution by narrowing the scope of the claims. *Id.*; see *Microsoft Corp. v. Multi-Tech Sys., Inc.*,

357 F.3d 1340, 1350 (Fed. Cir. 2004) (noting that “a patentee’s statements during prosecution, whether relied on by the examiner or not, are relevant to claim interpretation”).

Phillips rejected any claim construction approach that sacrificed the intrinsic record in favor of extrinsic evidence, such as dictionary definitions or expert testimony. The *en banc* court condemned the suggestion made by *Texas Digital Systems, Inc. v. Telegenix, Inc.*, 308 F.3d 1193 (Fed. Cir. 2002) that a court should discern the ordinary meaning of the claim terms (through dictionaries or otherwise) before resorting to the specification for certain limited purposes. *Phillips*, 415 F.3d at 1319–24. According to *Phillips*, reliance on dictionary definitions at the expense of the specification had the effect of “focus[ing] the inquiry on the abstract meaning of words rather than on the meaning of claim terms within the context of the patent.” *Id.* at 1321. *Phillips* emphasized that the patent system is based on the proposition that the claims cover only the invented subject matter. *Id.*

Phillips does not preclude all uses of dictionaries in claim construction proceedings. Instead, the court assigned dictionaries a role subordinate to the intrinsic record. In doing so, the court emphasized that claim construction issues are not resolved by any magic formula. The court did not impose any particular sequence of steps for a court to follow when it considers disputed claim language. *Id.* at 1323–25. Rather, *Phillips* held that a court must attach the appropriate weight to the intrinsic sources offered in support of a proposed claim construction, bearing in mind the general rule that the claims measure the scope of the patent grant.

The Supreme Court of the United States has “read [35 U.S.C.] § 112, ¶ 2 to require that a patent’s claims, viewed in light of the specification and prosecution history, inform those skilled in the art about the scope of the invention with reasonable certainty.” *Nautilus, Inc. v. Biosig Instruments, Inc.*, 572 U.S. 898, 910, 134 S. Ct. 2120, 2129 (2014). “A determination of claim

indefiniteness is a legal conclusion that is drawn from the court’s performance of its duty as the construer of patent claims.” *Datamize, LLC v. Plumtree Software, Inc.*, 417 F.3d 1342, 1347 (Fed. Cir. 2005) (citations and internal quotation marks omitted), *abrogated on other grounds by* *Nautilus*, 134 S. Ct. 2120. “Indefiniteness must be proven by clear and convincing evidence.” *Sonix Tech. Co. v. Publ’ns Int’l, Ltd.*, 844 F.3d 1370, 1377 (Fed. Cir. 2017).

III. AGREED TERMS

The parties have submitted the following agreed-upon constructions (Dkt. No. 69, Ex. A; Dkt. No. 90-1, at 20–30), which the Court adopts:

<u>Term</u>	<u>Construction</u>
“an authorization for each respective gateway to route data” (’312 Patent, Claims 35, 52)	No construction necessary; plain and ordinary meaning.
“said gateway is adapted to determine a physical location of said gateway” (’312 Patent, Claims 1–3, 14–22)	No construction necessary; plain and ordinary meaning.
“a first interface to the public Internet and a second interface communicably coupled to a network of a telephone service provider” (’638 Patent, All Claims)	“a first interface to the public Internet and a second interface coupled for communication with a network of a telephone service provider”
“authorize and de-authorize add-on base stations” (’638 Patent, All Claims)	No construction necessary; plain and ordinary meaning.
“unique property” (’638 Patent, Claims 1, 9, 18, 28)	No construction necessary; plain and ordinary meaning.

“recurrently issuing an operating authorization” (’638 Patent, Claims 17–36)	No construction necessary; plain and ordinary meaning.
“periodic/periodically” (’312 Patent, Claims 17, 27, 33, 43, 49)	No construction necessary; plain and ordinary meaning.
“a server of a server system” (’638 Patent, Claims 1, 9, 17, 27)	No construction necessary; plain and ordinary meaning.
“an authorization process used by the telephone service provider” (’638 Patent, Claims 7, 15, 25, 35)	No construction necessary; plain and ordinary meaning.
“track the add-on base station based on the identification” (’638 Patent, Claims 1–16, 18, 19, 28, 29)	No construction necessary; plain and ordinary meaning.
“temporarily licenses” (’638 Patent, Claims 26, 36)	No construction necessary; plain and ordinary meaning.

IV. DISPUTED TERMS

A. “gateway”

Plaintiff’s Proposed Construction	Defendants’ Proposed Construction
No construction necessary; plain and ordinary meaning applies. Alternatively: “entrance/exit to a communications network”	A network node (hardware and software) that permits devices on one network to communicate with or gain access to the facilities of another possibly dissimilar network.

(Dkt. No. 69, Ex. B, at 11; Dkt. No. 71, at 2; Dkt. No. 80, at 1; Dkt. No. 90-1, at 1.) The parties submit that this term appears in all Claims of the ’284 Patent, all Claims of the ’312 Patent, and Claims 1, 9, 17, and 27 of the ’638 Patent. (Dkt. No. 69, Ex. B, at 11; Dkt. No. 90-1, at 3.)

Shortly before the start of the January 29, 2019 hearing, the Court provided the parties with the following preliminary construction: “a network device that facilitates communication between two or more networks.”

(1) The Parties’ Positions

Plaintiff argues that “gateway” has a readily understandable general meaning, and “[e]ach independent claim puts the term ‘gateway’ within the context of communications networks—*i.e.*, a network gateway.” (Dkt. No. 71, at 2.) Plaintiff also argues that Defendants’ proposal “has no basis in the claims, specification, or intrinsic record,” “introduces various entities and concepts that have no basis in the claims,” and “only serves to obfuscate—not clarify—the scope of the claims.” (*Id.*, at 3.) Alternatively, “Barkan respectfully submits that the *primary* definition cited in Defendants’ extrinsic evidence should be used: ‘an entrance/exit to a communications network.’” (*Id.*)

Defendants respond that Plaintiff’s discussion of a technical dictionary contradicts Plaintiff’s assertion that jurors will readily understand this term. (Dkt. No. 80, at 1 (citing Dkt. No. 71, at 2).) Defendants also argue that “Plaintiff’s brief plainly acknowledges the claimed ‘gateway’ facilitates communications between *two* networks.” (Dkt. No. 80, at 2 (emphasis added).) Further, Defendants note that the technical dictionary definition discussed by the parties’ briefing confirms that a “gateway” is a “network node,” and Defendants submit that Plaintiff has not presented any evidence to the contrary. (*Id.*, at 3.)

Plaintiff replies that “the claim language tells the jury what is on each side of the claimed gateway,” “[t]he claims already state that the gateways are connected to networks,” and “[d]escribing a gateway as either ‘hardware or software’ provides no useful information.” (Dkt. No. 85, at 1.)

At the January 29, 2019 hearing, Plaintiff and Defendants presented no oral arguments as to this term and instead rested on their briefing.

(2) Analysis

Claim 1 of the '284 Patent, for example, recites (emphasis added):

1. A *gateway* to a packet-based data network comprising:
 - a transceiver adapted to establish a radio-frequency link with a mobile device;
 - a first *interface* adapted to *facilitate* data flow between the mobile device and the packet-based data network; and
 - a controller adapted to regulate data flow between the mobile device and the data network based, at least partially, on information received over the data network from a coordination center, which center is connected to the data network through a second interface.

The gateway recited in the claim thus involves facilitating communications between a radio-frequency link and a packet-based data network. As another example, Claim 1 of the '638 Patent recites (emphasis added):

1. An add-on base station comprising:
 - a transceiver adapted to establish a radio-frequency link with a mobile device;
 - a first interface, separate from said transceiver, that is adapted for communication over the public Internet;
 - a controller adapted to:
 - determine current geographical location data for the add-on base station using a global positioning system (GPS) device included in the add-on base station, wherein the current geographical location data includes location data determined by the GPS device;
 - transmit recurrent updates regarding current operating parameters to a server of a server system via the public Internet, wherein the current operating parameters include current geographical location data and the server system is adapted to identify the base station based on a unique property stored in a tamper-free unit of the add-on base station and to track the add-on base station based on the identification;
 - obtain, from a server of the server system accessed via the public Internet, *gateway* Internet Protocol (IP) address for a remote *gateway* that includes a *first interface* to the

public Internet and a *second interface* communicably coupled to a network of a telephone service provider; route, using the *gateway* IP address, data from the mobile device, over the public Internet, to the remote *gateway*; and wherein the add-on base station has transmission power lower than transmission power of conventional base stations and produces a cell smaller than macrocells of conventional base stations, and wherein the server system is adapted to authorize and de-authorize add on base stations to route data to the remote *gateway* through the public Internet by recurrently issuing an operating license for the add-on base station.

Here, too, the claim contemplates that a “gateway” interfaces with more than one network.

This understanding is also reinforced by a technical dictionary definition that the parties have discussed:

(1) An entrance/exit to a communications network. Gateways exist between any two communications service providers, e.g., between AT&T and the local telephone company that provides a connection to a subscriber or between AT&T and an international provider.

(2) A network node (hardware and software) that permits devices on one network (LAN) to communicate with or gain access to the facilities of another possibly dissimilar network. It can translate the protocols up to the application layer (e.g., ISO/OSI layer 7) of one network type into the corresponding protocols of a different network. In addition to protocol translation, it may contain capabilities such as fault isolation, rate conversion, or signal conversion necessary to provide system interoperability. It also requires that mutually acceptable administrative procedures be established among the interconnected networks.

(Dkt. No. 71, Ex. J, *Hargrave’s Communications Dictionary* 228 (SAMSUNG-0026301)²; see Dkt. No. 80, Ex. 1, *Lifewire: What is a Default Gateway in Networking* (Feb. 15, 2018) (SAMSUNG-0026556) (“A default gateway is used to allow devices in one network to communicate with devices in another network. . . . An easier way to understand a default gateway

² The parties have not provided a year of publication for this dictionary, but this exhibit has been cited by both sides.

might be to think of it as an intermediate device between the local network and the internet.”).) Indeed, even Plaintiff’s own opening brief states that “the add-on base stations themselves are gateways, as they comprise an *interface between two networks*.” (Dkt. No. 71, at 2 (emphasis added).)

Plaintiff’s proposal that a “gateway” can be merely an “entrance/exit to a communications network,” although based on a portion of the above-reproduced dictionary definition, is therefore overbroad when read out of context. Defendants’ proposed construction, by contrast, is consistent with the above-discussed evidence. Nonetheless, Defendants’ proposal of “hardware and software” would tend to confuse rather than clarify the scope of the claims. Instead, the construction need only clarify what the parties already essentially agree upon, namely that a “gateway” is a part of a network that facilitates communication between networks. As to Defendants’ proposal of “possibly dissimilar,” this possibility is readily encompassed simply by not including any similarity requirement in the construction.

The Court therefore hereby construes **“gateway”** to mean **“a network device that facilitates communication between two or more networks.”**

B. “packet-based data network”

Plaintiff’s Proposed Construction	Defendants’ Proposed Construction
an IP network, such as the Internet, used to transfer packets of data between a sender and a recipient	network carrying groups of data, control, error control, and sequence information arranged in a specific format suitable for transmission across the network, including but not limited to an IP network or the Internet

(Dkt. No. 69, Ex. B, at 7–8; Dkt. No. 71, at 3; Dkt. No. 80, at 3; Dkt. No. 90-1, at 3.) The parties submit that this term appears in all Claims of the ’284 Patent and all Claims of the ’312 Patent. (Dkt. No. 69, Ex. B, at 7–8; Dkt. No. 90-1, at 4.)

Shortly before the start of the January 29, 2019 hearing, the Court provided the parties with the following preliminary construction: “a network that transfers packets of data from a sender to a recipient.”

(1) The Parties’ Positions

Plaintiff submits that its proposed construction is supported by the specification and by the prosecution history. (Dkt. No. 71, at 4–5.) Plaintiff also argues that Defendants’ proposal “seeks to add a mishmash of unrelated limitations to the network that are never mentioned in the intrinsic evidence” and “would arguably encompass networks that are *not even packet-based*—such as the circuit-switched networks explicitly distinguished in the ’284 prosecution history.” (*Id.*, at 5.)³

Defendants respond that “[t]he claim language is not limited to IP networks,” and Defendants submit that “[p]acket-based networks that were not IP networks—such as X.25 packet-based data networks—were well-known at the time of the Asserted Patents.” (Dkt. No. 80, at 3–4.) Defendants also argue that neither the specification nor the prosecution history contains any disclaimer or other support for limiting “packet-based” to “IP.” (*Id.*, at 4.)⁴

Plaintiff replies that “Defendants’ construction is wrong because it references not packets (the claim term), but ‘groups of data’; and because networks transmitting only such ‘groups of data’—such as circuit-switched networks—were squarely distinguished in the ’284 prosecution

³ Plaintiff has also cited its own recent statements in *Inter Partes* Review (“IPR”) proceedings, but those statements do not significantly affect the Court’s analysis in the present claim construction proceedings. (See Dkt. No. 71, Ex. N, Sept. 10, 2018 Patent Owner’s Preliminary Response Under 37 C.F.R. § 42.107 to Petition for *Inter Partes* Review of U.S. Patent No. 8,014,284, at 11–12 & 18–19.)

⁴ Defendants have also submitted a recent Decision in IPR proceedings as to the ’284 Patent in which the Patent Trial and Appeal Board (“PTAB”) “disagree[d] with Patent Owner’s suggestion that ‘packet-based data network’ should be limited to an IP network such as the Internet.” (Dkt. No. 87, Ex. A, Jan. 8, 2019 Decision Instituting *Inter Partes* Review, at 22.)

history.” (Dkt. No. 85, at 1.) Plaintiff also argues that “Defendants’ construction is too narrow because it adds protocol limitations (control, error, and sequencing) that do not appear in the intrinsic evidence.” (*Id.*, at 1.)

At the January 29, 2019 hearing, Plaintiff and Defendants presented no oral arguments as to this term and instead rested on their briefing.

(2) Analysis

Claim 1 of the ’284 Patent, for example, recites (emphasis added):

1. A gateway to a *packet-based data network* comprising:
 - a transceiver adapted to establish a radio-frequency link with a mobile device;
 - a first interface adapted to facilitate data flow between the mobile device and the *packet-based data network*; and
 - a controller adapted to regulate data flow between the mobile device and the *data network* based, at least partially, on information received over the data network from a coordination center, which center is connected to the *data network* through a second interface.

The specification discloses that “an IP network” is an example of a relevant network, and the specification further identifies “the Internet” as an example of “an IP network”:

An existing network may include, *for example, an IP network, such as the Internet*, or Internet over cables, or a wired telephone network. Voice communication may be conducted in a voice over IP method using a known technology. Basically, the voice is digitized, sometimes compressed, and cut into *packets of data*.

The packets are sent over an *IP network* to their destination.

* * *

Any person or firm or other entity that has a telephone line (a connection to network 23) can buy an add-on base station 41 and connect it to the phone line, to create a new cell in the communication network. Thus, the public, on their own initiative, may add wireless cells to the network.

Thus, our box achieves the function of a cellular base station in a distributed cellular network. It is also a microcenter for routing calls, as detailed below.

The owner of the box connects it to an IP network to expand the existing cellular infrastructure—now a user can connect through the new base station to an Internet, to establish a link with a remote user.

It is assumed that all new base stations are connected to an Internet, since it is in widespread use. A user may connect to an Internet in various ways, for example using a telephone line, a cable TV channel, wireless links etc.

'284 Patent at 4:4–10 & 4:38–53 (emphasis added); *see id.* at 5:12–14 (“[N]ew base station 43 adds a new wireless cell in a location where there is available a link to an Internet network 24.”), 12:41–49 (“[mobile] [u]ser 11 communicates with new base station 43, that is connected to an Internet network 24”) & 14:34–39 (“A new base station 42 connects (bridges) between an Internet network 24 and the existing telephone network 23 . . .”).

Also, during prosecution, the patentee stated that “all the pending claims recite regulating access to a packet-based network (*e.g. the Internet*).” (Dkt. No. 71, Ex. D, Dec. 16, 2010 Amendment, at 11 (BARKAN-00000356) (p. 8 of 39 of Dkt. No. 71-6) (emphasis modified).) The patentee argued that “the cited references generally teach cellular networks, which are digital and data based, but are *circuit switched*.” (*Id.* (emphasis modified).) The patentee thus referred to “the Internet” merely as an example and used the term “packet-based data network” to distinguish circuit-switched networks.

Thus, the intrinsic evidence does not limit the term “packet-based data network” to necessarily being an “IP network.” Further, the extrinsic definitions cited by the parties as to “packet switching network” do not limit such networks to “IP” networks. (Dkt. No. 80, Ex. 2, *Newton’s Telecom Dictionary* 443 (11th ed. 1996) (SAMSUNG-0038120) (defining “Packet Switching Network” as “A network designed to carry data in the form of packets”).) Defendants

have also submitted extrinsic evidence that an “IP network” is merely a particular type of “packet-based” network.⁵ The Court therefore rejects Plaintiff’s proposal of “IP network.”⁶

The remaining dispute is whether the constituent term “packet” requires construction. Defendants have cited a technical dictionary that defines “packet” as: “A group of data, control, error control, and sequence information arranged in a specific format suitable for transmission as a single unit across a network.” (Dkt. No. 71, Ex. J, *Hargrave’s Communications Dictionary* 380 (SAMSUNG-0026303).⁷)

Another technical dictionary definition submitted by Defendants defines “packet” slightly differently as: “A bundle of data, usually in binary form, organized in a specific way for transmission. Three principal elements are included in the packet: 1. Control information — destination, origin, length of packet, etc., 2. the data to be transmitted and 3. error detection and correction bits.” (Dkt. No. 80, Ex. 2, *Newton’s Telecom Dictionary* 443 (11th ed. 1996) (SAMSUNG-0038120).)

⁵ Defendants’ expert has opined: “Packet-based data networks other than IP networks were known at the time of the Barkan patents. For example, X.25 networks, which existed before the IP protocol was defined, are another type of packet-based data network that was widely known in the communications field at the time of the Barkan patents. X.25 networks, like IP networks, are packet-switched networks rather than circuit-switched networks.” (Dkt. No. 80-13, Dec. 21, 2018 Lanning Decl. at ¶ 27.)

⁶ Plaintiff has also argued that Defendants’ opposition to “IP network” is inconsistent with Defendants’ proposed construction for “consideration-related policy database” (which Defendants argue must be “on the Internet”). No inconsistency is apparent, however, because Defendants’ proposal of “on the Internet” is based on prosecution history statements by the patentee as to the term “consideration-related policy database.” Also, for example, the recital in Claim 4 of the ’284 Patent of “information received over the data network from a consideration-related policy database” does not require that “the data network” is the only relevant network. Instead, receiving information from the consideration-related policy database could require transferring data over the Internet *as well as* over “the data network.” In other words, Plaintiff has not shown that the Internet and “the data network” would necessarily be one and the same network.

⁷ The parties have not provided a year of publication for this dictionary, but this exhibit has been cited by both sides.

On balance, Defendants have failed to demonstrate that the constituent term “packet” requires any construction, and Defendants’ proposal as to the meaning of “packet” would tend to confuse rather than clarify the scope of the claims, particularly as to the meaning of “groups.” Instead, the substantive dispute between the parties can be resolved by a construction that rejects Plaintiff’s proposal of limiting “packet-based data network” to necessarily being an “IP network.” In so finding, the Court also hereby expressly finds that this disputed term does not encompass a circuit-switched network, as the parties appear to agree and as confirmed by the above-discussed prosecution history.

The Court therefore hereby construes **“packet-based data network”** to mean **“a network that transfers packets of data from a sender to a recipient.”**

C. “coordination center”

Plaintiff’s Proposed Construction	Defendants’ Proposed Construction
center that provides information over the packet-based data network required for making a call	<p>one or more computers that coordinates the operation of add-on base stations* and determines and disseminates a price policy to add-on base stations</p> <p>*The term “add-on base stations” rather than the term “gateway” used in the ’284 patent and ’312 patent claims is used to avoid confusion with the term “remote gateway” that appears in certain ’312 patent claims</p>

(Dkt. No. 69, Ex. B, at 1; Dkt. No. 71, at 5; Dkt. No. 80, at 5; Dkt. No. 90-1, at 4–5.) The parties submit that this term appears in all Claims of the ’284 Patent and in Claims 2 and 4–55 of the ’312 Patent. (Dkt. No. 69, Ex. B, at 1; Dkt. No. 90-1, at 5.)

Shortly before the start of the January 29, 2019 hearing, the Court provided the parties with the following preliminary construction: “center that provides information required for making a call and that determines and disseminates a price policy.”

(1) The Parties’ Positions

Plaintiff argues that its proposal is consistent with surrounding claim language, the specification, and the prosecution history. (Dkt. No. 71, at 6.) Plaintiff also argues that Defendants’ proposal is “nonsensical” because “the claim language nowhere requires that the coordination center must ‘operate’ the base stations” and because “the claim language, specification, and prosecution histories do not require that the coordination center determine or disseminate a pricing policy.” (*Id.*, at 7.)

Defendants respond that “coordination center” is a coined term that has no commonly understood meaning and is described in the specification as novel, and “[t]he specification repeatedly and unequivocally states that the new coordination center (cellular center 3) determines and disseminates the price policy.” (Dkt. No. 80, at 6.) Defendants also argue that Plaintiff’s interpretation is inconsistent with prosecution history. (*Id.*, at 8.)⁸

Plaintiff replies that “Defendants are wrong that coordination center (also called a ‘cellular center’ or ‘center’ in the specification) is a ‘coined term,’ as such known centers were merely adapted for the invention.” (Dkt. No. 85, at 2 (citations omitted).) Alternatively, Plaintiff argues that “[t]he pricing policy is a potential responsibility, not a mandatory one.” (*Id.*)

At the January 29, 2019 hearing, the parties presented oral arguments as to this term.

⁸ Defendants have also submitted a recent Decision in IPR proceedings as to the ’284 Patent in which the PTAB stated: “At this stage in the proceeding, we determine the claim language itself, read in context with the specification, is sufficiently clear for the purposes of this Decision, and we decline to formally interpret ‘coordination center.’” (Dkt. No. 87, Ex. A, Jan. 8, 2019 Decision Instituting *Inter Partes* Review, at 24.)

(2) Analysis

Plaintiff has submitted that the patentee introduced this disputed term by amendment during prosecution to require information sent from a “coordination center” to the controller “over the data network.” (See Dkt. No. 71, Ex. D, Dec. 16, 2010 Amendment, at 2–5 (BARKAN-00000347–50) & 10–12 (BARKAN-00000355–57) (pp. 27–28 of 28 of Dkt. No. 71-5 & pp. 1–2 & 7–9 of 39 of Dkt. No. 71-6).)

Claim 1 of the ’284 Patent, for example, recites (emphasis added):

1. A gateway to a packet-based data network comprising:
 - a transceiver adapted to establish a radio-frequency link with a mobile device;
 - a first interface adapted to facilitate data flow between the mobile device and the packet-based data network; and
 - a controller adapted to regulate data flow between the mobile device and the data network based, at least partially, on information received over the data network from a *coordination center*, which center is connected to the data network through a second interface.

The claim thus explicitly recites “information received *over the [packet-based] data network* from a coordination center,” so Plaintiff’s proposal of “over the packet-based data network” is unnecessary. The other claims here at issue are similar in this regard. See, e.g., ’312 Patent at Cl. 2 (“wherein said gateway is further adapted to report its physical location to a coordination center *via the packet based data network*”) (emphasis added).

As to Defendants’ proposed construction, Plaintiff has argued claim differentiation based on dependent Claims 4, 11, and 19 of the ’284 Patent, which recite information from a “consideration-related policy database,” and the parties agree that “consideration” in this context refers to billing. For example, Claim 4 of the ’284 Patent recites (emphasis added):

4. The gateway according to claim 1, wherein said controller is further adapted to regulate data flow between the mobile device and the data network based, at least partially, on information received over the data network from a *consideration-related policy database*.

Because dependent Claims 4, 11, and 19 recite additional limitations beyond the “consideration-related policy database,” the doctrine of claim differentiation is of limited weight here. *See Wenger Mfg., Inc. v. Coating Mach. Sys., Inc.*, 239 F.3d 1225, 1233 (Fed. Cir. 2001) (“Claim differentiation, while often argued to be controlling when it does not apply, is clearly applicable when there is a dispute over whether a limitation found in a dependent claim should be read into an independent claim, *and that limitation is the only meaningful difference between the two claims.*”) (emphasis added). Also, even Plaintiff’s own proposed interpretation of “consideration-related policy database” (discussed below) refers to storing rather than to determining and dissemination.

Defendants have urged that “coordination center” is a coined term that has had no established meaning in the relevant art. (*See* Dkt. No. 80-13, Dec. 21, 2018 Lanning Decl., at ¶¶ 28–29.) The specification is consistent with Defendants’ position, disclosing that “[u]nlike presently used cellular centers, the center 3 of the novel network does not need to carry the role of a switchboard.” ’284 Patent at 7:28–30 (emphasis added). Plaintiff has not shown otherwise. Although Plaintiff has cited disclosure regarding “presently used cellular centers” (’284 Patent at 7:28–30; *see id.* at 6:7–36 & 6:51–60), Plaintiff has presented no evidence of any well-known meaning of “coordination center” in the relevant art.

The Court therefore turns to the specification because “terms coined by the inventor are best understood by reference to the specification.” *Intervet Inc. v. Merial Ltd.*, 617 F.3d 1282, 1287 (Fed. Cir. 2010); *accord Indacon, Inc. v. Facebook, Inc.*, 824 F.3d 1352, 1357 (Fed. Cir. 2016) (“terms [that] have no plain or established meaning to one of ordinary skill in the art . . . ordinarily cannot be construed broader than the disclosure in the specification”); *Irdeto Access, Inc. v.*

EchoStar Satellite Corp., 383 F.3d 1295, 1300 (Fed. Cir. 2004) (“absent . . . an accepted meaning [in the art], we construe a claim term only as broadly as provided for by the patent itself”).⁹

The specification discloses:

A novel approach uses a *cellular coordination center 3* that does not perform the actual call switching. Rather, the new center 3 just provides the information required for making a call. Center 3 (or a network of such centers) *stores information regarding the various base stations, their location and coverage, availability and connections*. When a user places a call, he demands information from center 3. Center 3 *provides the required information for placing a call*, including a base station close to the desired destination and more, as detailed below.

After providing the information to the caller, *center 3 does not participate in the actual call routing*; rather, this is performed by the caller, using the existing network infrastructure.

⁹284 Patent at 6:51–64 (emphasis added); *see id.* at 3:13–15 & 6:7–12 (similar). Defendants have also noted disclosure that “[t]he new center 3 *coordinates the operation* of the new base stations” *Id.* at 7:31–33 (emphasis added).

Nonetheless, Defendants’ proposal of “coordinates the operation” might be interpreted in a manner inconsistent with the disclosure that the coordination center “does not participate in the actual call routing.” *Id.* at 6:61–64. The Court therefore rejects Defendants’ proposal in that regard. Instead, a better understanding can be achieved by adopting the above-quoted specification language that refers to “the required information for placing a call.” *Id.* at 6:58.

⁹ Plaintiff has also cited a proposal by Defendant Cellco Partnership d/b/a Verizon Wireless (“Verizon”) in IPR proceedings before the PTAB, in which Verizon proposed interpreting “coordination center” as meaning “computer(s) that coordinate operation of the gateways.” (Dkt. No. 71, Ex. E, Sept. 6, 2018 Petition for *Inter Partes* Review of U.S. Patent No. 8,014,284, at 30 (square brackets omitted).) Particularly because this Petition itself noted that the interpretation might be different under the *Phillips* standards for claim construction (*see id.*, at 31), the Court does not find that Verizon’s proposal gives rise to any admission or estoppel, and the cited IPR document is not otherwise persuasive here.

As to Defendants' proposal that the "coordination center" necessarily "determines and disseminates a price policy," the specification discloses:

The cellular center is responsible for the price policy. It determines and publishes the cost for each operation over the network. The updated information may be transferred over an Internet, or may be available to add-on base stations.

The information may be dispersed between units in the network. In each transaction, the parties thereto will check the date of each price list. The more updated price list will be transferred to the other party. Thus, the new price list or policy will gradually expand throughout the network.

Id. at 7:56–64 (emphasis added).

Plaintiff has emphasized a particular passage in the specification, involving preserving caller anonymity, which contains no mention of pricing or billing. *See* '284 Patent at 8:30–60.

Yet, the specification repeatedly emphasizes pricing as a feature of the "novel" coordination centers: "The *novel* centers are also responsible for *price setting*, as determined by an operator there." *Id.* at 6:21–22 (emphasis added); *see id.* at 7:34–36 ("The duties of the cellular centers 3 include . . . [i]mplementing a price policy.") & 10:27–29 ("The billing policy can be written digitally by way of a digital document, with a date (and a short expiry date), *signed by the cellular center.*") (emphasis added). Further of note, such disclosures appear in the context that "[a]n important aspect of the present invention is the means for paying to the owner of the add-on base station for his/her services." *Id.* at 9:49–51; *see id.* at 5:27–31 ("The novel system includes means to offer an incentive to people, to motivate them to install and operate the base stations. These include means for collecting a payment for services rendered with the base station."). Plaintiff has not shown any inconsistency between these disclosures and the disclosure regarding preserving caller anonymity. *See* '284 Patent at 8:30–60.

Because "coordination center" has no established meaning in the relevant art, and because the patentee emphasized "price setting" and "price policy" as features of the "novel" coordination

center, the Court’s construction of “coordination center” should include this feature as Defendants have proposed. *See, e.g., VirnetX, Inc. v. Cisco Sys., Inc.*, 767 F.3d 1308, 1317–18 (Fed. Cir. 2014) (as to term that “does not have a plain and ordinary meaning in this context, and so must be defined by reference to the specification,” stating that “[t]he fact that [the feature at issue] is repeatedly and consistently used to characterize the invention strongly suggests that it should be read as part of the claim”) (citations and internal quotation marks omitted); *Irdeto*, 383 F.3d at 1300.¹⁰

The Court therefore hereby construes **“coordination center”** to mean **“center that provides information required for making a call and that determines and disseminates a price policy.”**

D. “consideration-related policy database”

Plaintiff’s Proposed Construction	Defendants’ Proposed Construction
a database storing information related to billing or pricing policies	a billing database located on the Internet that is not the same database as the authentication database

(Dkt. No. 69, Ex. B, at 1; Dkt. No. 71, at 7; Dkt. No. 80, at 9; Dkt. No. 90-1, at 5.) The parties submit that this term appears in Claims 4, 11, and 19 of the ’284 Patent. (Dkt. No. 69, Ex. B, at 1; Dkt. No. 90-1, at 5.)

Shortly before the start of the January 29, 2019 hearing, the Court provided the parties with the following preliminary construction: “a database on the Internet that stores information related to billing or pricing policies.”

¹⁰ The Court need not reach the issue of whether the European patent prosecution history cited by Defendants is applicable here. (*See* Dkt. No. 80, Ex. 3, July 18, 2011 Letter, at 5 (SAMSUNG-0030452); *see also id.*, Nov. 20, 2012 Letter, at 2 (SAMSUNG-0030347).)

(1) The Parties' Positions

Plaintiff argues that “Defendants’ contention that the database must be located ‘on’ the Internet is unsupported by the claim language.” (Dkt. No. 71, at 8.) Further, Plaintiff argues that “Defendants’ argument that the consideration-related policy database must be different from ‘the authentication database’ is unsupported by the claims or specification.” (*Id.*)

Defendants respond that the patentee’s “clear and unmistakable statements to the PTO about what the claimed consideration policy database is and why it is distinguishable from the prior art require that the database be construed as being on the Internet.” (Dkt. No. 80, at 10.) Defendants also similarly argue that the patentee “unequivocally argued that these two types of databases are not the same.” (*Id.*, at 11.)¹¹

Plaintiff replies that “Defendants fail to meet their burden to show prosecution-history disclaimer that ‘consideration-related policy database’ must be (a) located on the Internet and (b) distinct from ‘the authentication database.’” (Dkt. No. 85, at 3.)

At the January 29, 2019 hearing, the parties presented oral arguments as to this term.

(2) Analysis

Claim 4 of the ’284 Patent, for example, recites (emphasis added):

4. The gateway according to claim 1, wherein said controller is further adapted to regulate data flow between the mobile device and the data network based, at least partially, on information received over the data network from a *consideration-related policy database*.

¹¹ Defendants have also submitted a recent Decision in IPR proceedings as to the ’284 Patent in which the PTAB adopted the Petitioner’s proposal that “consideration-related policy database” includes “a collection of policies which take matters into account, which may include pricing matters,” because “Patent Owner does not substantively address Petitioner’s construction in the Preliminary Response.” (Dkt. No. 87, Ex. A, Jan. 8, 2019 Decision Instituting *Inter Partes* Review, at 19–20.)

The parties agree that “consideration” in this context refers to billing. The specification discloses as follows regarding “billing policy”:

The billing policy can be written digitally by way of a digital document, with a date (and a short expiry date), signed by the cellular center. This policy would be stored in all base stations and phones, and they set the prices (by means of tokens) that the phones pay.

When two units interact, they can compare the time stamps or the version of the policy held by each unit. Thus the policy is updated as necessary and there would not be any dispute between the parties.

The information may be dispersed between units in the network. In each transaction, the parties thereto will check the date of each price list. The more updated price list will be transferred to the other party. Thus, the new price list or policy will gradually expand throughout the network.

’284 Patent at 10:27–40; *see id.* at 7:36 & 7:56 (“price policy”); *see also id.* at 15:24–29 (“Billing in this case is by the receiver phone, or otherwise as set by policy of the cellular center.”).

As to Defendants’ proposal regarding an “authentication database,” during prosecution the patentee distinguished the “Xu” reference (United States Patent No. 6,501,732):

Applicant submits that the Xu reference simply fails to teach a consideration related policy database which is (a) connected to a packet based network, and (b) accessed by a gateway. Both of these limitations are missing from the policy database (i.e. authentication server) of Xu. The Xu reference simply teaches an authentication server (including a database) accessed by a Mobile Switch Center (“MSC”) managing a plurality of wireless access points (e.g. base stations). Aside and apart from the fact the authentication server of Xu is not accessed by the gateway and is not connected to a packet based network, the description of the Xu reference’s authentication server makes no mention of consideration related policies. *As is well known, in most cellular network architectures the billing database (i.e. consideration related database) and the authentication database are not the same. Although the billing database may be used to update the authentication database, the two are separate and distinct entities.* Based on the above explanation, it should be clear that the authentication server taught in Xu is not a consideration related policy database accessible by an access point (i.e. RF to packet based network gateways) – as claimed. The Xu reference clearly fails to teach a consideration related policy database used by an RF gateway to a packet-based network, as recited in all the pending independent claims.

(Dkt. No. 71, Ex. D, Mar. 1, 2010 Response, at 6–7 (BARKAN-00000392–93) (pp. 5–6 of 34 of Dkt. No. 71-7) (emphasis modified).)

Plaintiff has noted, however, that the statement that the billing database and authentication database “are separate and distinct entities” related not to the claimed invention but rather to “most cellular network architectures,” which are described as being “well known.” In other words, the patentee’s statements can be fairly interpreted as arguing merely that disclosure of an authentication server does not necessarily imply disclosure of a consideration-related policy database. Consequently, no prosecution disclaimer is apparent. *See Golight, Inc. v. Wal-Mart Stores, Inc.*, 355 F.3d 1327, 1332 (Fed. Cir. 2004) (“Because the statements in the prosecution history are subject to multiple reasonable interpretations, they do not constitute a clear and unmistakable departure from the ordinary meaning of the term. . . .”); *see also Tech. Properties Ltd. LLC v. Huawei Techs. Co.*, 849 F.3d 1349, 1357–58 (Fed. Cir. 2017) (“If the challenged statements are ambiguous or amenable to multiple reasonable interpretations, prosecution disclaimer is not established.”).

As to whether the consideration-related policy database must be “on the Internet,” Defendants have cited prosecution history in which the patentee distinguished the “Barany” reference (United States Patent No. 6,594,252):

[I]n the claimed gateway, the consideration related policy database is associated with the the [sic] data network, rather than with the gateway.

For example, *according to what is claimed*, the database is located *on the Internet*, and the controller [sic] in the gateway regulates data flow between the mobile device and the Internet based on the database that resides on the Internet. The novel structure is not part of prior art cellular systems (like the one Barany teaches), as the database in those systems is never located *in the Internet*, but rather, the database is always located as part of the cellular system.

(Dkt. No. 71, Ex. D, May 20, 2007 Response, at 3 (BARKAN-00000497) (p. 3 of 38 of Dkt. No. 71-10) (emphasis modified).) Plaintiff has noted that this passage includes the phrase “[f]or example,” but the context shows that the sentence is calling out just one feature of the invention, not just an exemplary embodiment. Furthermore, the phrase “according to what is claimed” weighs heavily in favor finding that the patentee’s statements have a limiting effect. Also, the patentee repeated this assertion in two later portions of the prosecution history. (*See* Dkt. No. 71, Ex. D, June 29, 2008 Amendment, at 4 (BARKAN-00000462) (p. 11 of 43 of Dkt. No. 71-9) (“One of the novel features of the current invention is having a consideration-related [sic] policy database over the Internet”); *see also id.*, Mar. 30, 2009 Amendment, at 4 (BARKAN-00000427) (p. 6 of 30 of Dkt. No. 71-8) (same).)

These repeated, definitive statements should be given effect in the Court’s construction. *See Omega Eng’g, Inc. v. Raytek Corp.*, 334 F.3d 1314, 1324 (Fed. Cir. 2003) (“As a basic principle of claim interpretation, prosecution disclaimer promotes the public notice function of the intrinsic evidence and protects the public’s reliance on definitive statements made during prosecution.”).

Finally, at the January 29, 2019 hearing, Plaintiff urged that any purported disclaimer does not apply to the disputed term because the patentee subsequently amended the claims. Upon review, no relevant modification is apparent because the consideration-related policy database was recited in relation to a data network both before and after the amendments. (*See* Dkt. No. 71, Ex. D, Dec. 16, 2010 Amendment, at 2–5 (BARKAN-00000347–50) & 10–12 (BARKAN-00000355–57) (pp. 27–28 of 28 of Dkt. No. 71-5 & pp. 1–2 & 7–9 of 39 of Dkt. No. 71-6).) Further, to whatever extent the amendments might be viewed as potentially altering the earlier disclaimer, the patentee had an obligation to notify the examiner of any purported withdrawal of the disclaimer.

See *Hakim v. Cannon Avent Group, PLC*, 479 F.3d 1313, 1315–18 (Fed. Cir. 2007) (“Although a disclaimer made during prosecution can be rescinded, permitting recapture of the disclaimed scope, the prosecution history must be sufficiently clear to inform the examiner that the previous disclaimer, and the prior art that it was made to avoid, may need to be re-visited.”); *see also id.* at 1315–18. Plaintiff has identified no evidence of any such withdrawal.

The Court therefore hereby construes **“consideration-related policy database”** to mean **“a database on the Internet that stores information related to billing or pricing policies.”**

E. “route data”

Plaintiff’s Proposed Construction	Defendants’ Proposed Construction
No construction necessary; plain and ordinary meaning applies. Alternatively: “send data to its destination”	select or determine the path that data will take

(Dkt. No. 69, Ex. B, at 2; Dkt. No. 71, at 9; Dkt. No. 80, at 11; Dkt. No. 90-1, at 5–6.) The parties submit that this term appears in Claims 14–21, 24–37, and 40–54 of the ’312 Patent and all Claims of the ’638 Patent. (Dkt. No. 69, Ex. B, at 2; Dkt. No. 90-1, at 7.)

Shortly before the start of the January 29, 2019 hearing, the Court provided the parties with the following preliminary construction: “send data toward its destination by choosing from among multiple alternative links.”

(1) The Parties’ Positions

Plaintiff argues that “route data” “is used in its plain and ordinary sense” and “refers to sending data between certain claimed network elements.” (Dkt. No. 71, at 9.) Plaintiff further urges that “the intrinsic record . . . does not require that routing of data involve selecting or determining the exact path the data takes.” (*Id.*, at 10.) Plaintiff submits that Defendants’ proposal in this regard

“is at odds with how packet-based data networks (such as the Internet) actually work,” wherein “it is generally not possible for the sending device to select the exact ‘path’ that data will take.” (*Id.*)

Defendants argue:

[T]he verb “route” is recited in the context of packet-based data communications networks, of which the public Internet is an example. In such packet-based networks, the data that is transmitted is first separated into individual packets, with each packet including a destination address. Each of the packets can travel over different network paths (also known as routes) from the source to the destination. These different paths consist of links between network nodes known as “routers.” Each router receives an incoming packet and selects, based on a routing table and the destination IP address, one of the multiple outbound links over which each packet will travel to the next router or a final destination. This link selection process is known as “routing,” and it is collectively performed by the routers along the packet’s path.

(Dkt. No. 80, at 11–12 (citations omitted).) Defendants submit that this interpretation is consistent with the specification and is not contradicted by the prosecution history. (*Id.*, at 12.)

Plaintiff replies that “Defendants propose a construction of ‘route’ that they concede a POSITA would know *cannot be performed* by the claimed invention in a packet-based data network.” (Dkt. No. 85, at 4.)

In sur-reply, Defendants argue that “a claimed add-on base station could select, using the gateway IP address, the path that data from a mobile device takes over the public Internet to a remote gateway as required by each claim of the ’638 patent under the correct construction of ‘route data’ by using the ‘source path routing’ feature of the Internet Protocol.” (Dkt. No. 89, at 3.)

At the January 29, 2019 hearing, Plaintiff agreed with the use of “toward” in the Court’s preliminary construction, but Plaintiff urged that there should be no requirement of “multiple alternative links.”

(2) Analysis

The specification discloses: “The packets are sent over an IP network to their destination. It is possible that some packets are lost during the routing, and that the packets are received in a different order.” ’312 Patent at 4:15–17.

Plaintiff has submitted evidence that packet-switched networks generally do not allow for the sending device to specify a “path” for data to follow. (*See* Dkt. No. 71, Ex. M, Charles R. Severance, *Introduction to Networking: How the Internet Works*, at 16–17 (SAMSUNG-0026541–42) (“Your packet has a source address and destination address and the router needs to look at the destination address to figure out how to best move your packet towards its destination. With each router handling packets destined for any of many billions of destination computers, it’s not possible for every router to know the exact location and best route to every possible destination computer. So the router makes its best guess as to how to get your packet closer to its destination.”); *see also id.*, at 8 (SAMSUNG-0026537) (“routers forward each packet separately based on source and destination addresses”; “different packets may take different routes”).) This evidence weighs against requiring determining a path (rather than merely moving packets toward a destination).

Defendants have submitted extrinsic dictionary definitions of “route” as meaning “to determine the path that a message or call is to take in a communications network” (Dkt. No. 71, Ex. J, *Hargrave’s Communications Dictionary* 449 (SAMSUNG-0026305)¹²) and “routing” as “[t]he process of selecting the correct circuit path for a message” (Dkt. No. 80, Ex. 2, *Newton’s Telecom Dictionary* 520 (1996) (SAMSUNG-0038121)). Defendants have also submitted extrinsic evidence that IP networks allow for “strict source routing,” which “is a method by which a

¹² The parties have not provided a year of publication for this dictionary, but this exhibit has been cited by both sides.

transmitting device, which could be the ‘add-on base station’ claimed in the ’638 patent, can select each node along the path that packets from the transmitting device will travel over an IP network to a destination node, which could be a remote gateway, in that network.” (Dkt. No. 89-1, Jan. 14, 2019 Lanning Decl., at ¶ 4.)

Yet, one of these technical dictionaries also defines “routing” as “[t]he process of determining which of several alternative routers to use in sending a data packet *toward* its destination.” (Dkt. No. 71, Ex. J, *Hargrave’s Communications Dictionary* 449 (SAMSUNG-0026305) (emphasis added); *see id.* (“The packet may travel through several networks, each with its own routers, before reaching the final destination.”).) The opinions of Defendants’ expert to the contrary are unpersuasive. (Dkt. No. 80-13, Dec. 21, 2018 Lanning Decl., at ¶¶ 33–36; *see id.*, at ¶ 35 (“Only a device such as a router that is connected to a network via multiple outbound links ‘routes’ data by *selecting one of those outbound links*.”) (emphasis added).)¹³

Thus, neither the intrinsic evidence nor the extrinsic evidence warrants the narrow interpretation proposed by Defendants. Instead, this evidence demonstrates that to “route data” refers merely to sending data toward a selected destination. This is consistent with the context in which the disputed term is used in the claims. For example, Claim 14 of the ’312 Patent recites (formatting modified; emphasis added):

14. The gateway of claim 1 wherein the gateway is further adapted to:
 obtain, from a coordination center accessed via the packet-based data network, gateway address information for a remote gateway that provides an interface between the packet-based data network and a network of a telephone service provider; and
 route data from the mobile device, over the packet-based data network, to the remote gateway.

¹³ Plaintiff has also cited deposition testimony of Defendants’ expert. Defendants have argued that Plaintiff mischaracterizes that testimony. Because the Court does not rely on Plaintiff’s arguments in this regard, the Court need not address this testimony.

Thus, routing the data to the remote gateway is recited in relation to obtaining address information for the remote gateway. The claim therefore uses “route data” in the context of determining the proper *destination* (rather than in the context of selecting one of multiple available outbound links). Finally, this interpretation is consistent with the illustration of add-on base stations having just one connection to an IP network, rather than multiple alternative links. *See, e.g.,* ’312 Patent at Fig. 5.

The Court therefore hereby construes **“route data”** to mean **“send data toward a selected destination.”**

F. “regulating data flow”

Plaintiff’s Proposed Construction	Defendants’ Proposed Construction
controlling access to the packet-based data network by the mobile device	Putting or maintaining in order a flow of data

(Dkt. No. 69, Ex. B, at 7; Dkt. No. 71, at 10; Dkt. No. 80, at 13; Dkt. No. 90-1, at 7.) The parties submit that this term appears in all Claims of the ’284 Patent. (Dkt. No. 90-1, at 8.)

Shortly before the start of the January 29, 2019 hearing, the Court provided the parties with the following preliminary construction: “controlling a flow of data.”

(1) The Parties’ Positions

Plaintiff argues that “[t]he claims make clear that there is a distinction between ‘regulating data flow’—performed, for example, by the controller in claim 1—and merely facilitating data flow—performed, for example, by the interface between the gateway base station and the packet-based data network.” (Dkt. No. 71, at 11.) Plaintiff submits that the specification and the prosecution history support Plaintiff’s proposal of interpreting this disputed term as referring to control. (*See id.*, at 11–12.) Plaintiff further argues that Defendants’ proposed construction is unclear and lacks support in the intrinsic record. (*Id.*)

Defendants argue this term together with the term “a controller adapted to regulate data flow.” (See Dkt. No. 80, at 13–17.) In particular, Defendants respond that “the claims do not recite anything about ‘access.’” (*Id.*, at 17.) Defendants also argue that “Plaintiff’s construction incorrectly changes what is claimed—*i.e.*, the controller regulating the bidirectional flow of data *between* the mobile device and the data network—to the unclaimed concept of the controller unidirectionally limiting the access of the mobile device to the network.” (*Id.*)¹⁴

Plaintiff replies that “[r]egulating data flow refers to controlling access to the data network, . . . and Defendants make no attempt to rebut the unambiguous statements in the prosecution history so indicating.” (Dkt. No. 85, at 4.)

At the January 29, 2019 hearing, the parties presented oral arguments. Defendants were amenable to the Court’s preliminary construction.

(2) Analysis

Claim 3 of the ’284 Patent, for example, depends from Claim 1, and Claims 1 and 3 recite (emphasis added):

1. A gateway to a packet-based data network comprising:
 - a transceiver adapted to establish a radio-frequency link with a mobile device;
 - a first interface adapted to facilitate data flow between the mobile device and the packet-based data network; and
 - a controller adapted to *regulate data flow* between the mobile device and the data network based, at least partially, on information received over the data network from a coordination center, which center is connected to the data network through a second interface.

* * *

3. A method of providing data to a mobile device comprising:

¹⁴ Defendants have also submitted a recent Decision in IPR proceedings as to the ’284 Patent in which the PTAB “disagree[d] with Patent Owner’s conclusion that the regulating data flow limitations are limited to regulating ‘access.’” (Dkt. No. 87, Ex. A, Jan. 8, 2019 Decision Instituting *Inter Partes* Review, at 25.)

establishing a data link between the mobile device and a radio-frequency transceiver, which transceiver is functionally associated with a packet based data network through a first interface;

regulating data flow between the mobile device and the packet based data network based, at least partially, on information received over the data network from a coordination center, which center is connected to the data network through a second interface.

Claim 1 thus uses both “facilitate” and “regulate,” which implies that these terms have distinct meanings. Defendants’ proposal of “putting or maintaining in order” might be interpreted by a finder of fact as being akin to “facilitate,” so the separate recital of “facilitate” weighs at least somewhat against Defendants’ proposed construction. At the January 29, 2019 hearing, Defendants also alternatively proposed that the term “regulating data flow” does not require any construction. The parties focused their oral arguments on whether “regulating data flow” necessarily refers to controlling “access.”

The specification does not use “regulate” or “regulating” outside of the claims, and the disclosures cited by Plaintiff do not inform the meaning of these terms. *See* ’284 Patent at 8:21–62 & 9:26–47 (“the center checks the authorization of the caller to sen[d] the request”).

Plaintiff has also cited prosecution history in which the patentee distinguished “Johnson” (United States Patent No. 6,497,599) and “Xu” (United States Patent No. 6,501,732):

The Examiner admits in the Final Office Action that the Johnson reference makes no mention of this limitation (see pg. 3 line 1 of the Office Action). In reality, not only is there no mention or suggestion of regulating data flow to a packet based data network from a gateway, the Johnson reference makes no mention whatsoever of regulating data flow through a gateway at all. Furthermore, *all of the components the Johnson reference teaches operate within a circuit switched network and not a packet-based network and are focused on bandwidth allocation and not regulation of data flow*. In short, the Johnson reference teaches nothing regarding data flow regulation and gateway management or structure.

* * *

Applicant respectfully asserts that anyone of ordinary skill in the art reading the teachings of the Xu and Johnson references, both of which relate to cellular circuit

switched networks, would not consider applying their teachings (i.e. related to RF management and policy based buffer management techniques) to the gateway, communication system and method claimed in the pending claims - as each of the pending claims is specifically directed to *regulating access* of a wireless device (not RF bandwidth or buffer size) to a packet based network to which the gateway is connected (e.g. Internet) based on information received over the packet-based network.

(Dkt. No. 71, Ex. D, Dec. 16, 2010 Amendment, at 10 & 12 (BARKAN-00000355 & -357) (pp. 7 and 9 of 39 of Dkt. No. 71-6) (emphasis added).)

Although the patentee distinguished Johnson and Xu as not disclosing regulating, Plaintiff has not shown that the patentee elaborated upon the meaning of regulating. In other words, Plaintiff has not shown how these statements by the patentee regarding Johnson and Xu necessarily inform the meaning of “regulating” as used in the patents-in-suit.¹⁵ Also, to whatever extent these statements can be interpreted as distinguishing controlling bandwidth, the patentee did so specifically with reference to circuit-switched networks, not with reference to bandwidth more generally. *See Omega Eng’g*, 334 F.3d at 1324 (“As a basic principle of claim interpretation, prosecution disclaimer promotes the public notice function of the intrinsic evidence and protects the public’s reliance on *definitive* statements made during prosecution.”) (emphasis added).

As to extrinsic evidence, Plaintiff has submitted a general dictionary definition of “regulate” as meaning “To control or direct according to rule, principle, or law.” (Dkt. No. 71, Ex. F, *The American Heritage Dictionary* 705 (4th ed. 2001) (BARKAN-00004301).) Plaintiff’s proposal of “controlling” is thus supported by evidence, and on balance this term “involves little more than the application of the widely accepted meaning of commonly understood words.”

¹⁵ Plaintiff has also cited its own recent statements in *Inter Partes* Review proceedings, but those statements do not significantly affect the Court’s analysis in the present claim construction proceedings. (*See* Dkt. No. 71, Ex. N, Sept. 10, 2018 Patent Owner’s Preliminary Response Under 37 C.F.R. § 42.107 to Petition for *Inter Partes* Review of U.S. Patent No. 8,014,284, at 14–15.)

Phillips, 415 F.3d at 1314. This understanding is also consistent with the recital in above-reproduced Claim 1 of “a *controller* adapted to regulate data flow.”

In sum, although “regulating” refers to “controlling,” Plaintiff has not shown how “regulating data flow” necessarily refers to controlling “access to the packet-based data network by the mobile device.” The above-reproduced claim language does not refer to “access,” and Plaintiff has not otherwise justified introducing “access” into the construction.

The Court therefore hereby construes **“regulating data flow”** to mean **“controlling a flow of data.”**

G. “a controller adapted to regulate data flow”

Plaintiff’s Proposed Construction	Defendants’ Proposed Construction
<p>“Controller control[ing] access to the packet-based data network by the mobile device”</p> <p>Not a means-plus-function limitation.</p> <p>Alternatively, if construed as a means-plus-function term:</p> <p>Function: “regulate data flow”</p> <p>Structure: “controller 54, or equivalent”</p>	<p>means-plus-function (under <i>Williamson</i>)</p> <p>Function: “regulate data flow” (“regulate” means “to put or maintain in order”)</p> <p>Structure: call controller 54, but there is insufficient disclosure of how the call controller 54 performs the claimed function</p>

(Dkt. No. 69, Ex. B, at 4–5; Dkt. No. 71, at 12; Dkt. No. 80, at 14; Dkt. No. 90-1, at 8.) The parties submit that this term appears in Claims 1, 2, and 4–18 of the ’284 Patent. (Dkt. No. 69, Ex. B, at 4; Dkt. No. 90-1, at 8.)

Shortly before the start of the January 29, 2019 hearing, the Court provided the parties with the following preliminary construction: “Plain meaning (Not means-plus-function).”

(1) The Parties' Positions

Plaintiff argues that Defendants have not rebutted the presumption against means-plus-function treatment for this non-means term because “[t]he structure is apparent from the claim language, which requires a controller that regulates data flow between a mobile device and a data network.” (Dkt. No. 71, at 13.) Alternatively, Plaintiff submits that the specification discloses adequate corresponding structure because “[t]he specification explains that controller 54 supervises and controls the operation of the ‘channel electronic means’ connecting the first and second channels.” (*Id.*, at 13–14.)

Defendants respond that “[t]he presumption [against means-plus-function treatment] is overcome here because ‘controller’ neither connotes any form of structure to one of skill in the art in the context of the Asserted Patents, nor recites structure sufficient to perform the claimed function.” (Dkt. No. 80, at 14.) Defendants also argue that although the parties agree the proper corresponding structure is “controller 54,” this structure is insufficient because “controller 54 is merely a black box and the descriptive text merely states what controller 54 does without providing any structural information about the controller itself.” (*Id.*, at 16.)

Plaintiff replies that “[a] POSITA understands a ‘controller’ as a specific structure capable of regulating data flow.” (Dkt. No. 85, at 5.) Alternatively, Plaintiff argues that there is sufficient corresponding structure because “the specification provides specific examples of the controller’s structure and operation.” (*Id.*, at 5.)

At the January 29, 2019 hearing, the parties presented oral arguments as to this term.

(2) Analysis

Claim 1 of the ’284 Patent, for example, recites (emphasis added):

1. A gateway to a packet-based data network comprising:

a transceiver adapted to establish a radio-frequency link with a mobile device;

a first interface adapted to facilitate data flow between the mobile device and the packet-based data network; and

a controller adapted to regulate data flow between the mobile device and the data network based, at least partially, on information received over the data network from a coordination center, which center is connected to the data network through a second interface.

Title 35 U.S.C. § 112(f) (formerly § 112, ¶ 6) provides: “An element in a claim for a combination may be expressed as a means or step for performing a specified function without the recital of structure, material, or acts in support thereof, and such claim shall be construed to cover the corresponding structure, material, or acts described in the specification and equivalents thereof.” “In exchange for using this form of claiming, the patent specification must disclose with sufficient particularity the corresponding structure for performing the claimed function and clearly link that structure to the function.” *Triton Tech of Tex., LLC v. Nintendo of Am., Inc.*, 753 F.3d 1375, 1378 (Fed. Cir. 2014).

“[T]he failure to use the word ‘means’ . . . creates a rebuttable presumption . . . that § 112, para. 6 does not apply.” *Williamson v. Citrix Online LLC*, 792 F.3d 1339, 1348 (Fed. Cir. 2015) (citations and internal quotation marks omitted). “When a claim term lacks the word ‘means,’ the presumption can be overcome and § 112, para. 6 will apply if the challenger demonstrates that the claim term fails to recite sufficiently definite structure or else recites function without reciting sufficient structure for performing that function.” *Id.* at 1349 (citations and internal quotation marks omitted).

Williamson, in an *en banc* portion of the decision, abrogated prior statements that the absence of the word “means” gives rise to a “strong” presumption against means-plus-function treatment. *Id.* (citation omitted). *Williamson* also abrogated prior statements that this presumption “is not readily overcome” and that this presumption cannot be overcome “without a showing that

the limitation essentially is devoid of anything that can be construed as structure.” *Id.* (citations omitted). Instead, *Williamson* found, “[h]enceforth, we will apply the presumption as we have done prior to *Lighting World*” *Id.* (citing *Lighting World, Inc. v. Birchwood Lighting, Inc.*, 382 F.3d 1354, 1358 (Fed. Cir. 2004)). In a subsequent part of the decision not considered *en banc*, *Williamson* affirmed the district court’s finding that the term “distributed learning control module” was a means-plus-function term that was indefinite because of lack of corresponding structure, and in doing so *Williamson* stated that “‘module’ is a well-known nonce word.” 792 F.3d at 1350.

Here, Defendants have identified no authority for the proposition that “controller” is a “nonce” term under *Williamson*, and Defendants have submitted no persuasive evidence that the term “controller” fails to connote structure in the relevant art. *See* 792 F.3d at 1350; *see also Zeroclick, LLC v. Apple Inc.*, 891 F.3d 1003, 1007–09 (Fed. Cir. 2018) (discussing “giving effect to the unrebutted presumption against the application of § 112, ¶ 6”). Nothing in the specification suggests that “controller” lacks structure. *See* ’284 Patent at 10:59–63 (“The channel electronic means 53 implements the actual communications to connect between the channels 51 and 52. A call controller 54 supervises and controls the operation of means 53, according to commands received from a user through the control inputs 541 for the base station.”).

Plaintiff has submitted technical dictionary definitions of “controller,” thereby reinforcing that the term “controller” refers to a known class of structures. (*See* Dkt. No. 85, Ex. I.1, *IBM Dictionary of Computing* 145 (1994) (“A device that coordinates and controls the operation of one or more input/output devices, such as workstations, and synchronizes the operation of such devices with the operation of the system as a whole.”); *see also id.*, Ex. H.1, *The IEEE Standard Dictionary of Electrical and Electronics Terms* 217 (6th ed. 1996); Dkt. No. 71, Ex. L, *Newton’s Telecom*

Dictionary 152 (11th ed. 1996) (BARKAN-00004292).) The opinions of Defendants’ expert to the contrary are unpersuasive. (See Dkt. No. 80-13, Dec. 21, 2018 Lanning Decl., at ¶¶ 37–40.)¹⁶

This interpretation is consistent with principles articulated by the Federal Circuit prior to the abrogated *Lighting World* decision. See *Greenberg v. Ethicon Endo-Surgery, Inc.*, 91 F.3d 1580, 1583 (Fed. Cir. 1996) (finding that “detent mechanism” was not a means-plus-function term because “‘detent’ denotes a type of device with a generally understood meaning in the mechanical arts, even though the definitions are expressed in functional terms”).¹⁷

Finally, Defendants have not shown that the term “controller” is analogous to the term “cheque standby unit” that failed to connote sufficiently definite structure in *Diebold Nixdorf, Inc. v. International Trade Commission*, 899 F.3d 1291, 1298 (Fed. Cir. 2018). Defendants’ reliance on the *Media Rights* case is similarly unpersuasive. See *Media Rights Techs., Inc. v. Capital One Fin. Corp.*, 800 F.3d 1366, 1373 (Fed. Cir. 2015) (finding “compliance mechanism” to be a means-plus-function term).

The Court therefore concludes that Defendants have failed to rebut the presumption against means-plus-function treatment, and Defendants have not presented any alternative proposed construction. Thus, no further construction is necessary.

The Court accordingly hereby construes “**a controller adapted to regulate data flow**” to have its **plain meaning**.

¹⁶ Plaintiff has also submitted a rough draft of a deposition transcript in which Defendants’ expert appeared to understand the term “controllers” as referring to a class of known structures. (See Dkt. No. 85, Ex. P, Jan. 4, 2019 Lanning dep. at 5:12–13 (“It’s probably been probably easily 50 different types of controllers that I have worked on.”).)

¹⁷ See *id.* (“It is true that the term ‘detent’ does not call to mind a single well-defined structure, but the same could be said of other commonplace structural terms such as ‘clamp’ or ‘container.’ What is important is not simply that a ‘detent’ or ‘detent mechanism’ is defined in terms of what it does, but that the term, as the name for structure, has a reasonably well understood meaning in the art.”)

H. “connection regulator adapted to facilitate data flow”

Plaintiff’s Proposed Construction	Defendants’ Proposed Construction
No construction necessary; plain and ordinary meaning applies. Not a means-plus-function limitation. Alternatively: “a controller adapted to enable data flow and control access” Alternatively, if construed as a means-plus-function term: Function: “facilitate data flow” Structure: “controller 54, or equivalent”	means-plus-function (under <i>Williamson</i>) Function: “facilitate data flow” Structure: No structure is linked to the claimed function in the specification. To the extent that anything in the specification might correspond to the claimed function, it appears to be “channel electronic means 53” which is referred to as “circuits for connecting” in the Abstract, but no structure is disclosed for the “channel electronic means 53” or the “circuits for connecting.”

(Dkt. No. 69, Ex. B, at 6; Dkt. No. 71, at 15; *see* Dkt. No. 90-1, at 8–9.) The parties submit that this term appears in all Claims of the ’312 Patent. (Dkt. No. 69, Ex. B, at 6; Dkt. No. 90-1, at 9.)

Shortly before the start of the January 29, 2019 hearing, the Court provided the parties with the following preliminary construction: “Controller adapted to facilitate data flow (Not means-plus-function).”

(1) The Parties’ Positions

Plaintiff argues that Defendants have not rebutted the presumption against means-plus-function treatment for this non-means term because “[t]he structure is straightforward from the claim language alone.” (Dkt. No. 71, at 15–16.) Alternatively, Plaintiff argues that “[b]y implementing and supervising communications between channels, the call controller 54 both enables data flow (data facilitation) and controls access (data regulation) between the claimed communication channels.” (*Id.*, at 16.)

Defendants respond that “‘connection regulator’ is a coined nonce term that has no known meaning—and does not connote any form of structure—to one of ordinary skill in the art.” (Dkt. No. 80, at 17.) Defendants argue that “[t]he claims here are indefinite because the specification fails to disclose corresponding structure that is both clearly linked to, and adequate to perform, the claimed function.” (*Id.*, at 18.)

Plaintiff replies that “[a] regulator is a well-known structure in the art.” (Dkt. No. 85, at 5.) Alternatively, Plaintiff argues that “[t]he specification provides sufficient structure for a skilled artisan to know and understand what structure corresponds to the limitation.” (*Id.*, at 6.)

At the January 29, 2019 hearing, the parties presented oral arguments as to this term.

(2) Analysis

Claim 1 of the ’312 Patent, for example, recites (emphasis added):

1. A gateway to a packet-based data network comprising:
 - a transceiver adapted to establish a radio frequency link with a mobile device;
 - a connector to a packet based data network; and
 - a *connection regulator adapted to facilitate data flow* between the mobile device and the packet-based data network;wherein said gateway is adapted to determine a physical location of said gateway.

Defendants’ expert has opined that although the term “regulator” has structural meaning in some contexts (such as “voltage regulator” in the context of electrical circuits), the term “connection regulator” has no structural meaning in any relevant art. (*See* Dkt. No. 80-13, Dec. 21, 2018 Lanning Decl., at ¶¶ 42–44; *cf. Williamson*, 792 F.3d at 1351 (regarding the term “distributed learning control,” noting that “the presence of modifiers can change the meaning of ‘module’” but “the presence of these particular terms does not provide any structural significance to the term ‘module’ in this case”); *Adv. Ground Info. Sys., Inc. v. Life360, Inc.*, 830 F.3d 1341, 1348 (Fed. Cir. 2016) (“Irrespective of whether the terms ‘symbol’ and ‘generator’ are terms of art in

computer science, the *combination* of the terms as used in the context of the relevant claim language suggests that it is simply an abstraction that describes the function being performed (i.e., the generation of symbols).”).

Plaintiff’s expert attempts to analogize to an automotive voltage regulator, through which “the battery charging current is regulated by intermittently *connecting* the generator to the battery.” (Dkt. No. 85, Ex. Y, Jan. 8, 2019 Lomp Decl., at ¶ 43.) Although a voltage regulator might involve connecting and disconnecting, Plaintiff has not shown how this *use* of a connection in a known structure demonstrates that the term “connection regulator” refers to a known structure or class of structures.

Nonetheless, the specification discloses:

The basic function of the station is to connect a first channel 51 with a second channel 52. Either channel may be wired or wireless, using various technologies.

The channel electronic means 53 implements the actual communications to connect between the channels 51 and 52. *A call controller 54 supervises and controls the operation of means 53*, according to commands received from a user through the control inputs 541 for the base station.

’312 Patent at 10:62–11:2 (emphasis added); *see id.* at Figs. 2 & 5–7.

On balance, this disclosure demonstrates that the recital of “connection regulator” in the claims of the ’312 Patent aligns with the disclosures regarding “call controller 54” as well as with the recitals of a “controller” in the claims of the ’248 Patent. The opinions of Plaintiff’s expert are further persuasive in this regard. (*See* Dkt. No. 98, Ex. A, Jan. 22, 2019 Lomp dep. at 185:18–186:21.)

Defendants urged at the January 29, 2019 hearing that “connection regulator” should not be interpreted as referring to a controller because different terms are presumed to have different meanings, even as between different patents, when the claims at issue stem from the same

specification. Even assuming that such a presumption arises, “[d]ifferent terms or phrases in separate claims may be construed to cover the same subject matter where the written description and prosecution history indicate that such a reading of the terms or phrases is proper.” *Nystrom v. TREX Co., Inc.*, 424 F.3d 1136, 1143 (Fed. Cir. 2005). The context provided by the above-cited portions of the specification support reading “connection regulator” as referring to a controller.

Finally, the extrinsic technical dictionary definitions of “regulator” cited by Plaintiff provide additional support. (See Dkt. No. 85, Ex. W, *Comprehensive Dictionary of Electrical Engineering* 542 (1999) (defining “regulator” as “a controller designed to maintain the state of the controlled variable at a constant value, despite fluctuations of the load”); *id.*, Ex. V, *The Illustrated Dictionary of Electronics* 671 (2d ed. 1982) (defining “regulator” as: “1. A device that automatically holds a quantity to a constant value, e.g., voltage regulator. 2. A device by means of which a quantity may be varied, e.g., potentiometer, rheostat, variable autotransformer.”); *id.*, Ex. S, *Modern Dictionary of Electronics* 637 (7th ed. 1999) (defining “regulator” as “1. A device whose function is to maintain a designated characteristic at a predetermined value or to vary it according to a predetermined plan. 2. A device used to maintain a desired output voltage or current constant regardless of normal changes to the input or to the output load.”).)

Defendants have therefore failed to rebut the presumption against means-plus-function treatment, and the Court interprets the phrase “connection regulator” as referring to a controller.

The Court accordingly hereby construes “**connection regulator adapted to facilitate data flow**” to mean “**controller adapted to facilitate data flow.**”

I. “public Internet”

Plaintiff’s Proposed Construction	Defendants’ Proposed Construction
No construction necessary; plain and ordinary meaning applies.	network formed by devices that are assigned public IP addresses

(Dkt. No. 69, Ex. B, at 3; Dkt. No. 71, at 16; Dkt. No. 80, at 19; Dkt. No. 90-1, at 9.) The parties submit that this term appears in Claims 15–18, 21, 25–27, 30–31, 41–43, and 47–48 of the ’312 Patent and Claims 1–2, 4–6, 9–10, 12–14, 17, 20, 22–24, 27, 30, 32–34, and 36 of the ’638 Patent. (Dkt. No. 69, Ex. B, at 3; Dkt. No. 90-1, at 10.)

Shortly before the start of the January 29, 2019 hearing, the Court provided the parties with the following preliminary construction: “Plain meaning.”

(1) The Parties’ Positions

Plaintiff submits that “[e]very juror will be familiar with the public Internet.” (Dkt. No. 71, at 16.) Plaintiff argues that Defendants’ proposal should be rejected because “[t]he network comprising the ‘public Internet’ is not the same as the network of devices that are assigned public IP addresses.” (*Id.*, at 17.)

Defendants respond by distinguishing between public and private IP addresses and by asserting that “Plaintiff fails to offer *any* explanation of what the public Internet is, much less explain what one of ordinary skill in the art understands it to be, other than to say it is one type of packet-based data network.” (Dkt. No. 80, at 19.)

Plaintiff replies that “Mr. Lanning [Defendants’ expert] admitted that devices which are not part of the public Internet can be assigned public IP addresses,” and “[t]he jury will readily understand the meaning of ‘public Internet.’” (Dkt. No. 85, at 6.)

At the January 29, 2019 hearing, the parties presented oral arguments as to this term.

(2) Analysis

Claim 15 of the ’312 Patent depends from Claim 14, which in turn depends from Claim 1. Claims 1, 14, and 15 recite (emphasis added):

1. A gateway to a packet-based data network comprising:

a transceiver adapted to establish a radio frequency link with a mobile device;
a connector to a packet based data network; and
a connection regulator adapted to facilitate data flow between the mobile device and the packet-based data network;
wherein said gateway is adapted to determine a physical location of said gateway.

* * *

14. The gateway of claim 1 wherein the gateway is further adapted to: obtain, from a coordination center accessed via the packet-based data network, gateway address information for a remote gateway that provides an interface between the packet-based data network and a network of a telephone service provider; and route data from the mobile device, over the packet-based data network, to the remote gateway.

15. The gateway of claim 14 wherein the packet-based data network comprises the *public Internet*.

This claim language contains no suggestion that the patentee used the term “Internet” to have any meaning other than its general, well-known meaning.

The specification discloses:

New base station 43 illustrates yet another type of network enhancement. It generates a wireless cell that is *directly connected to an Internet 24*.

’284 Patent at 5:9–11. Defendants have not shown that this disclosure of being “directly connected” to the Internet necessarily implies that every device connected to the Internet must have a public IP address. Conversely, Defendants have not persuasively shown that a device that has been given a public IP address is necessarily on the “public Internet.” (*See* Dkt. No. 98, Ex. A, Jan. 4, 2019 Lanning Dep. at 63:22–64:10 (“So in my mind, even if a closed private network uses public IP addresses, that’s not the public internet.”); *see also Lextron Sys., Inc. v. Microsoft Corp.*, No. C-04-0588, 2005 WL 6220089, at *8 (N.D. Cal. June 1, 2005) (Walker, C.J.) (“there is only one ‘Internet’”).)

On balance, Defendants’ concerns regarding the distinction between “public” networks and “private” networks is addressed by the disputed term itself specifying “public.” The opinions of Defendants’ expert regarding “public” IP addresses are therefore unpersuasive. (*See* Dkt. No. 80-13, Dec. 21, 2018 Lanning Decl., at ¶¶ 45–49.)

Defendants argue that “it is clear to one of ordinary skill in the art that the base station must use a public rather than a private IP address” (Dkt. No. 80, at 20), but Defendants’ have not shown how the term “public Internet” purportedly imposes any limitation as to the address of a base station. To whatever extent Defendants are arguing that Plaintiff’s contentions are inconsistent with the requirement of a packet-based data network comprising the public Internet, any such dispute raises factual questions regarding infringement rather than any legal question for claim construction. *See PPG Indus. v. Guardian Indus. Corp.*, 156 F.3d 1351, 1355 (Fed. Cir. 1998) (“after the court has defined the claim with whatever specificity and precision is warranted by the language of the claim and the evidence bearing on the proper construction, the task of determining whether the construed claim reads on the accused product is for the finder of fact”); *see also Eon Corp. IP Holdings LLC v. Silver Spring Networks, Inc.*, 815 F.3d 1314, 1318–19 (Fed. Cir. 2016) (citing *PPG*).

The Court therefore hereby expressly rejects Defendants’ proposed construction, and no further construction is necessary. *See U.S. Surgical Corp. v. Ethicon, Inc.*, 103 F.3d 1554, 1568 (Fed. Cir. 1997) (“Claim construction is a matter of resolution of disputed meanings and technical scope, to clarify and when necessary to explain what the patentee covered by the claims, for use in the determination of infringement. It is not an obligatory exercise in redundancy.”); *see also O2 Micro Int’l Ltd. v. Beyond Innovation Tech. Co.*, 521 F.3d 1351, 1362 (Fed. Cir. 2008) (“[D]istrict courts are not (and should not be) required to construe every limitation present in a patent’s

asserted claims.”); *Finjan, Inc. v. Secure Computing Corp.*, 626 F.3d 1197, 1207 (Fed. Cir. 2010) (“Unlike *O2 Micro*, where the court failed to resolve the parties’ quarrel, the district court rejected Defendants’ construction.”); *ActiveVideo Networks, Inc. v. Verizon Commcn’s, Inc.*, 694 F.3d 1312, 1326 (Fed. Cir. 2012); *Summit 6, LLC v. Samsung Elecs. Co., Ltd.*, 802 F.3d 1283, 1291 (Fed. Cir. 2015).¹⁸

The Court accordingly hereby construes “**public Internet**” to have its **plain meaning**.

J. “tamper-free hardware” and “tamper-free unit”

Plaintiff’s Proposed Construction	Defendants’ Proposed Construction
“tamper-free hardware”: “hardware designed to prevent or inhibit tampering” “tamper-free unit”: “mechanism designed to prevent or inhibit tampering”	unit/hardware that includes means to destroy its contents or delete information stored therein, if someone tries to tamper with it

(Dkt. No. 69, Ex. B, at 7; Dkt. No. 80, at 20; Dkt. No. 90-1, at 11; *see* Dkt. No. 71, at 18.) The parties submit that these terms appear in Claims 1–16, 18–19, and 28 of the ’638 Patent and Claim 13 of the ’312 Patent. (Dkt. No. 90-1, at 12.)

Shortly before the start of the January 29, 2019 hearing, the Court provided the parties with the following preliminary constructions: “hardware that includes means to destroy its contents or delete information stored therein, if someone tries to tamper with it”; and “unit that includes means to destroy its contents or delete information stored therein, if someone tries to tamper with it.”

¹⁸ *Lextron*, 2005 WL 6220089, at *8 (“‘Internet’ has entered the popular lexicon and needs no construction”).

(1) The Parties' Positions

Plaintiff argues that Defendants' proposal should be rejected because "[t]he specification is clear that the information-destruction implementation is merely one form of claimed tamper-proofing." (Dkt. No. 71, at 18.) Plaintiff submits that "[t]amper' is susceptible to its plain and ordinary meaning, and neither party seeks to construe it." (*Id.*) As to "tamper-free unit," Plaintiff submits that "[t]he specification contemplates that the base stations' anti-tamper features may be implemented not only through hardware (as discussed above), but also through other mechanisms associated with the base station unit, such as software-based solutions." (Dkt. No. 71, at 19.)

Defendants respond that these terms "are not terms of art and have no established customary meaning in the art of cellular communications," and "the sole teaching in the patents regarding what 'tamper-free' means is that the box includes means to destroy or delete its contents if there is attempted tampering." (Dkt. No. 80, at 20.)

Plaintiff replies that "tampering is a well-understood term" and "the specification examples of tamper-free units do not make tampering *impossible*, but merely inhibit tampering." (Dkt. No. 85, at 7.)

At the January 29, 2019 hearing, the parties presented oral arguments as to this term.

(2) Analysis

Claim 1 of the '638 Patent, for example, recites in relevant part (emphasis added):

1. An add-on base station comprising:
 - a transceiver adapted to establish a radio-frequency link with a mobile device;
 - a first interface, separate from said transceiver, that is adapted for communication over the public Internet;
 - a controller adapted to:
 - determine current geographical location data for the add-on base station using a global positioning system (GPS)
 - device included in the add-on base station,

wherein the current geographical location data includes location data determined by the GPS device;
transmit recurrent updates regarding current operating parameters to a server of a server system via the public Internet, wherein the current operating parameters include current geographical location data and the server system is adapted to identify the base station based on a unique property stored in a *tamper-free unit* of the add-on base station and to track the add-on base station based on the identification;

The specification discloses:

The information regarding prices of use of the net and the additional, private base stations, is disseminated as digital documents *encrypted so as to prevent tampering with*.

* * *

The billing unit can be a “black box” inside each apparatus. *This black box can be tamper-free, including means to destroy its contents or delete the information therein, if someone tries to tamper with it.* This ensures that it can be trusted to work under commands given in policy documents.

The billing unit may be implemented as part of a call controller 54 in the base station, see FIG. 2.

In another embodiment, the black box function may be contained within a smart card.

’284 Patent at 6:22–25, 10:41–49 (emphasis added).

Plaintiff has argued that the “means to destroy its contents or delete the information therein” is merely a preferred feature. *See UltimatePointer, L.L.C. v. Nintendo Co., Ltd.*, 816 F.3d 816, 822 (Fed. Cir. 2016) (“We have cautioned against importing limitations from the specification into the claims when performing claim construction”).

Yet, what is set forth as preferred in this disclosure is the “tamper-free” feature itself. The language relied upon by Defendants explains the meaning of “tamper-free” in this context.

Plaintiff argues that “the jury will likewise understand what it means for something to be resistant to tampering,” but the term here at issue is “tamper-free,” not tamper-resistant. Although Plaintiff has submitted an extrinsic dictionary definition of “free” as meaning “[n]ot hampered or restricted in its normal operation,” Plaintiff has not shown how this extrinsic definition has any bearing upon the meaning of “tamper-free” in the context of the claims. (Dkt. No. 71, Ex. O, *Merriam-Webster’s Collegiate Dictionary* 464 (10th ed. 1997) (BARKAN-00004272).)

Indeed, Plaintiff has not rebutted the opinions of Defendants’ expert that “tamper-free” has had no established meaning in the relevant art. (*See* Dkt. No. 80-13, Dec. 21, 2018 Lanning Decl., at ¶ 60 (“The apparently narrower term ‘tamper-free’ is also unclear and perhaps more so because, in addition to the uncertainty associated with terms like ‘tamper-resistant,’ it is not clear to one of ordinary skill in the art as to whether the term ‘tamper-free’ is intended to connote something more than tamper-resistant.”); *see also id.*, at ¶¶ 58–59.) This absence of established meaning provides further support for interpreting “tamper-free” in accordance with the above-reproduced specification disclosure. *See Irdeto*, 383 F.3d at 1300 (“absent . . . an accepted meaning [in the art], we construe a claim term only as broadly as provided for by the patent itself”).

At the January 29, 2019 hearing, Plaintiff urged that a person of ordinary skill in the art would recognize that encryption does not make tampering impossible. Plaintiff concluded that the disclosure regarding documents “encrypted so as to prevent tampering” shows that to “prevent tampering” means merely to make tampering more difficult. ’284 Patent at 6:22–25. Plaintiff has not shown support in the intrinsic or extrinsic evidence for drawing such inferences, and the Court finds none.

The Court therefore hereby construes “**tamper-free hardware**” to mean “**hardware that includes means to destroy its contents or delete information stored therein, if someone tries**

to tamper with it.” The Court also construes **“tamper-free unit”** to mean **“unit that includes means to destroy its contents or delete information stored therein, if someone tries to tamper with it.”**

K. “transmission power lower than transmission power of conventional base stations”

Plaintiff’s Proposed Construction	Defendants’ Proposed Construction
No construction necessary; plain and ordinary meaning applies. Alternatively: “transmission power lower than the transmission power of a cellular-frequency macrocell site”	Indefinite

(Dkt. No. 69, Ex. B, at 8; Dkt. No. 71, at 19; Dkt. No. 80, at 21; Dkt. No. 90-1, at 12.) The parties submit that this term appears in Claims 1–16 of the ’638 Patent. (Dkt. No. 69, Ex. B, at 8; Dkt. No. 90-1, at 13.)

Shortly before the start of the January 29, 2019 hearing, the Court provided the parties with the following preliminary construction: “Plain meaning (Not indefinite).”

(1) The Parties’ Positions

Plaintiff argues that the meaning of this term is readily apparent based on surrounding claim language and disclosures in the specification. (*See* Dkt. No. 71, at 19–20.)

Defendants respond that “independent claims 1 and 9 of the ’638 patent are indefinite because there was no common understanding among those of ordinary skill in the art of what the ‘transmission power of conventional base stations’ is, and the patent does not define one.” (Dkt. No. 80, at 21.)

Plaintiff replies that Defendants “attempt to obfuscate a simple, easily-understood feature—that the patented device is a less powerful alternative to conventional cell towers that consumers can install in homes or businesses.” (Dkt. No. 85, at 7.)

At the January 29, 2019 hearing, the parties presented oral arguments as to this term.

(2) Analysis

Claim 1 of the ’638 Patent, for example, recites in relevant part (emphasis added):

1. An add-on base station comprising:
 - a transceiver adapted to establish a radio-frequency link with a mobile device;
 - a first interface, separate from said transceiver, that is adapted for communication over the public Internet;
 - a controller . . .
 - wherein the add-on base station has *transmission power lower than transmission power of conventional base stations* and produces a cell smaller than macrocells of conventional base stations

As a threshold matter, the portions of the specification cited by Plaintiff regarding “a relatively high transmit power” and a “regular base station” do not provide any clear meaning for the disputed term. ’284 Patent at 1:29–33 & 3:63–64; *see id.* at 16:47–49 (“a high power transmitter or a large antenna”).

Further, Defendants have submitted evidence that there was no particular “conventional” transmission power at the relevant time. Instead, transmission power has had a wide range. (*See* Dkt. No. 80, Ex. 5 at 14 (SAMSUNG-0030141) (defining classes with power ratings ranging from 2.5W to 640W); *see also id.*, Ex. 4; Dkt. No. 80-13, Dec. 21, 2018 Lanning Decl., at ¶ 68 (“If we include GSM 900 micro- and pico-base stations, the variance extends even further down to 13 dBm (about 0.02 W) to 24 dBm (about 0.2512 W). Thus, in GSM 400 and 900 networks at the time of the purported invention of the Asserted Patents, the ‘transmission power of a conventional base station’ may potentially represent a range of possible transmission powers in which the

highest maximum nominal transmission power (640 W) was about 32,000 times greater than the lowest maximum nominal transmission power (0.02 W).”) (citations omitted); *id.*, at ¶¶ 67–69.)

Nonetheless, this evidence regarding “micro- and pico-base stations” is not relevant in the context of the subsequent claim language reciting “produc[ing] a cell smaller than *macrocells* of conventional base stations.” Plaintiff has submitted sufficient evidence that the term “macrocell” has been known in the relevant art. (*See* Dkt. No. 71, Ex. L, *Newton’s Telecom Dictionary* 361 (11th ed. 1996) (BARKAN-00004288) (“macrocell is a new word for what we used to call a ‘cell’”); *see also* Dkt. No. 80, Ex. 6, Robin Coombs and Raymond Steele, *Introducing Microcells into Macrocellular Networks: A Case Study*, 47 IEEE Transactions on Communications 568 (Apr. 1999) (SAMSUNG-0026282) (referring to “conventional size cells, often called macrocells”).)

The disclosure that the invention may employ “antenna towers,” cited by Defendants, does not disturb this understanding because the use of a tower does not necessarily imply any particular transmission power. *See* ’284 Patent at 15:53–58. Instead, the disputed term is directed to transmission power lower than the transmission power of any known base station for a “macrocell” at the time of the invention. *See Muniauction, Inc. v. Thomson Corp.*, 532 F.3d 1318, 1326 (Fed. Cir. 2008) (“The use of ‘conventional’ to modify ‘Internet browser’ and ‘web browsing software’ denotes a reference to web browsers in existence at the time of the alleged invention . . .”), *abrogated on other grounds by Travel Sentry, Inc. v. Tropp*, 877 F.3d 1370 (Fed. Cir. 2017); *see also PC Connector Solutions, LLC v. SmartDisk Corp.*, 406 F.3d 1359, 1363 (Fed. Cir. 2005) (discussing “conventional” as referring to “technologies existing at the time of the invention”).

Thus, on balance, the disputed term sufficiently “inform[s] those skilled in the art about the scope of the invention with reasonable certainty.” *Nautilus*, 572 U.S. at 910; *see id.* at 909 n.5; *see also Interval Licensing LLC v. AOL, Inc.*, 766 F.3d 1364, 1370 (Fed. Cir. 2014) (“We do not

understand the Supreme Court to have implied in *Nautilus* . . . that terms of degree are inherently indefinite.”).

The Court therefore concludes that Defendants have failed to show indefiniteness. *See Sonix*, 844 F.3d at 1377. Defendants have not presented any alternative proposed construction, and no further construction is necessary.

The Court accordingly hereby construes **“transmission power lower than transmission power of conventional base stations”** to have its **plain meaning**.

L. “produces a cell smaller than macrocells of conventional base stations”

Plaintiff’s Proposed Construction	Defendants’ Proposed Construction
No construction necessary; plain and ordinary meaning applies. Alternatively: “produces a cellular signal that extends a distance which is less than the distance of the cellular signal produced by a cellular macrocell site”	Indefinite

(Dkt. No. 69, Ex. B, at 9; Dkt. No. 71, at 22; Dkt. No. 80, at 23; Dkt. No. 90-1, at 13–14.) The parties submit that this term appears in Claims 1–16 of the ’638 Patent. (Dkt. No. 69, Ex. B, at 9; Dkt. No. 90-1, at 15.)

Shortly before the start of the January 29, 2019 hearing, the Court provided the parties with the following preliminary construction: “Plain meaning (Not indefinite).”

(1) The Parties’ Positions

Plaintiff argues that “[t]he concept of the size of the cell created by the base station as compared to the size of the cell created by a macrocell is straightforward, and should be given its plain and ordinary meaning.” (Dkt. No. 71, at 22.) Plaintiff further argues that “definiteness only requires ‘reasonable certainty’ as to its coverage, and a POSITA would understand that the

limitation does not cover cell sizes associated with conventional macrocell sites, even ones with small cells.” (*Id.*, at 23 (citation omitted).)

Defendants respond that this term is indefinite because “there was no common understanding among those of ordinary skill in the art regarding the size of ‘macrocells of conventional base stations.’” (Dkt. No. 80, at 23.)

Plaintiff replies that “[b]ecause a POSITA would know of the cell sizes corresponding to conventional base stations, Defendants not only failed to meet their burden, but disproved their indefiniteness theory with the evidence they submitted.” (Dkt. No. 85, at 9.)

At the January 29, 2019 hearing, the parties presented oral arguments as to this term.

(2) Analysis

The specification uses the term “cell” to refer to an area. *See* ’284 Patent at 1:38–40 (“As more users are to be served in a specific area, the cells are made smaller, and more base stations have to be installed.”); *see also id.* at 4:32–34 (“Once this device, the base station 41, is bought and operated by its owner, it generates a wireless cell in its surroundings.”). Plaintiff has also submitted extrinsic evidence explaining that “[a] city or county is divided into smaller ‘cells’” and “[b]y controlling the transmission power, the radio frequencies assigned to one cell can be limited to the boundaries of that cell.” (Dkt. No. 71, Ex. L, *Newton’s Telecom Dictionary* 118 (11th ed. 1996) (BARKAN-00004291).)

Defendants have submitted evidence of a broad range of possible sizes for cells, such as with a radius ranging from half of a kilometer up to 50 kilometers. (*See* Dkt. No. 80-13, Dec. 21, 2018 Lanning Decl., at ¶¶ 71–74; *see also* Dkt. No. 80, Ex. 4, at 6 (SAMSUNG-0026458).) This evidence also shows that some cellular standards do not specify a minimum cell size. (*See id.*) Defendants have also cited testimony in which Plaintiff’s expert purportedly gave inconsistent

answers regarding the size of a macrocell. (*See* Dkt. No. 97, Ex. A, Jan. 22, 2019 Lomp dep. at 57:19–58:12, 74:7–22, 81:6–16 & 98:12–99:1.) Still, the above-cited evidence submitted by Defendants demonstrates that persons of ordinary skill in the art have had a reasonably well-defined understanding of the size of a “cell,” and Defendants’ own evidence uses the term “macrocells” to refer to “conventional size cells.” (Dkt. No. 80, Ex. 6, Robin Coombs and Raymond Steele, *Introducing Microcells into Macrocellular Networks: A Case Study*, 47 IEEE Transactions on Communications 568 (Apr. 1999) (SAMSUNG-0026282); *see Muniauction*, 532 F.3d at 1326; *see also PC Connector*, 406 F.3d at 1363 (discussing “conventional” as referring to “technologies existing at the time of the invention”).)

The disputed term is thus directed to a cell size smaller than that of any “macrocell” at the time of the invention, and the disputed term sufficiently “inform[s] those skilled in the art about the scope of the invention with reasonable certainty.” *Nautilus*, 572 U.S. at 910. The Court therefore concludes that Defendants have failed to show indefiniteness. *See Sonix*, 844 F.3d at 1377. Defendants have not presented any alternative proposed construction, and no further construction is necessary.

The Court accordingly hereby construes **“produces a cell smaller than macrocells of conventional base stations”** to have its **plain meaning**.

M. “the add-on base station . . . is [owned and] installed by an individual or entity, separate and distinct from the telephone service provider, with access to the public Internet”

Plaintiff’s Proposed Construction	Defendants’ Proposed Construction
No construction necessary; plain and ordinary meaning applies. Alternatively: “add-on base station[s]. . . has access to the public Internet, and is set up for use by a person or entity other than a telecommunications provider”	Indefinite - § 112 mixed method/apparatus claim Alternatively: no patentable weight

(Dkt. No. 80, at 24; Dkt. No. 90-1, at 15; *see* Dkt. No. 69, Ex. B, at 10; *see also* Dkt. No. 71, at 23.)

The parties submit that this term appears in Claims 5, 6, 13, 14, 23, 24, 33, and 34 of the ’638 Patent. (Dkt. No. 69, Ex. B, at 10; Dkt. No. 90-1, at 15.)

Shortly before the start of the January 29, 2019 hearing, the Court provided the parties with the following preliminary construction: “Indefinite” (based on *IPXL Holdings, LLC v. Amazon.com, Inc.*, 430 F.3d 1377 (Fed. Cir. 2005)).

(1) The Parties’ Positions

Plaintiff argues that “[j]urors will know exactly what this phrase means—that the add-on base stations are Internet-capable devices that consumers can install on their own.” (Dkt. No. 71, at 23.) Plaintiff also argues that “[t]his claim term is not an improper mixed method/apparatus claim (and also has patentable weight) because it contains limitations describing a ‘structure’—the add-on base station with access to the Internet—by ‘reciting its capabilities’—the capability to be owned and installed by an entity other than a telephone network operator.” (*Id.*, at 24 (citation omitted).)

Defendants respond that “[t]hese limitations are indefinite because they impermissibly mix an apparatus and a method.” (Dkt. No. 80, at 24.) In particular, Defendants argue that the claims

“do not recite ‘capable of’ or any similar phrase, and instead affirmatively require that the add-on base station ‘is owned and installed’ by an individual or entity.” (*Id.*, at 25.)

Plaintiff replies: “The limitation simply recites the plug-and-play nature of the claimed device (which the Patents-in-Suit distinguish from the expensive, static infrastructure associated with conventional macrocells, such as cell towers, that are installed only by telephone service providers). This term places a design limitation on the claimed structure: that the base station be configured for installation by *non-telecom* carriers.” (Dkt. No. 85, at 9.)

At the January 29, 2019 hearing, Plaintiff and Defendants presented no oral arguments as to this term and instead rested on their briefing.

(2) Analysis

A single patent may include claims directed to one or more of the classes of patentable subject matter, but no single claim may cover more than one subject matter class. *IPXL Holdings[, LLC v. Amazon.com, Inc.]*, 430 F.3d [1377,] 1384 [(Fed. Cir. 2005)] (holding indefinite a claim covering both an apparatus and a method of using that apparatus).

Microprocessor Enhancement Corp. v. Tex. Instruments Inc., 520 F.3d 1367, 1374 (Fed. Cir. 2008).

Claims 5 and 6 of the ’638 Patent, for example, recite:

5. The add-on base station of claim 1, wherein the add-on base station is owned and installed by an individual or entity, separate and distinct from the telephone service provider, with access to the public Internet.

6. The add-on base station of claim 1, wherein the add-on base station expands coverage of a cellular network and is owned and installed by an individual or entity, separate and distinct from the telephone service provider, with access to the public Internet.

Plaintiff has cited the Federal Circuit’s *UltimatePointer* decision for the proposition that *IPXL* does not apply where the limitation at issue “reflects the capability of th[e] structure rather than the activities of the user.” 816 F.3d at 827. Plaintiff has similarly cited this Court’s statement

in *Motion Games* that an “apparatus claim that simply contains functional limitations that describe a structure by reciting its capabilities is not an indefinite mixing of claim forms.” *Motion Games, LLC v. Nintendo Co., Ltd.*, No. 6:12-CV-878, 2015 WL 11170167, at *2 (E.D. Tex. Jan. 16, 2015) (Love, J.) (citation and internal quotation marks omitted).

Such authorities are distinguishable because here the above-reproduced claims do not recite a mere capability. Instead, the claims recite that the add-on base station actually “*is* owned and installed by an individual or entity” (rather than a telephone service provider). This action language in the dependent claims contrasts with, for example, the recitals of “adapted to” in Claim 1 of the ’638 Patent, and Claim 1 contains no indication that the add-on base station has already been installed. Thus, at best, “it is unclear whether infringement of [the claim] occurs when one creates a system that allows the user to [own and install the add-on base station], or whether infringement occurs when the user actually [owns and installs the add-on base station].” *IPXL*, 430 F.3d at 1384; *see also In re Katz Interactive Call Processing Patent Litig.*, 639 F.3d 1303, 1318 (Fed. Cir. 2011) (“Like the language used in the claim at issue in *IPXL* (‘wherein . . . the user uses’), the language used in Katz’s claims (‘wherein . . . callers digitally enter data’ and ‘wherein . . . callers provide . . . data’) is directed to user actions, not system capabilities.”). The same analysis also applies to Claims 13, 14, 23, 24, 33, and 34 of the ’638 Patent.

The Court therefore hereby finds that Claims 5, 6, 13, 14, 23, 24, 33, and 34 of the ’638 Patent are **indefinite**.

N. “unique identity bound to a cryptographic key”

Plaintiff’s Proposed Construction	Defendants’ Proposed Construction
No construction necessary. Alternatively: “unique identity associated with a cryptographic key”	unique identity and a cryptographic key included in a certificate issued by a certifying authority

(Dkt. No. 69, Ex. B, at 10; Dkt. No. 71, at 25; Dkt. No. 80, at 26; Dkt. No. 90-1, at 15.) The parties submit that this term appears in Claims 8–13 & 39–52 of the ’312 Patent. (Dkt. No. 69, Ex. B, at 10; Dkt. No. 90-1, at 16.)

Shortly before the start of the January 29, 2019 hearing, the Court provided the parties with the following preliminary construction: “unique identity and a cryptographic key associated with one another in a certificate issued by a certificate authority.”

(1) The Parties’ Positions

Plaintiff argues that “Defendants’ attempt to limit the unique identifier to ‘a certificate issued by a certifying authority’ has no basis.” (Dkt. No. 71, at 26.) Indeed, Plaintiff argues, “there is no mention of a ‘certifying authority’ anywhere in the claims or specification” and “the specification explicitly does *not* limit the means for achieving the unique identity.” (*Id.* (citing ’284 Patent at 2:34–46 & 11:25–26).)

Defendants respond that their proposed construction “reflects the ordinary meaning of this claim phrase in the field of cryptography because cryptographic keys are bound to unique identities by a certificate issued by a certifying authority.” (Dkt. No. 80, at 26.) Defendants also argue that the specification is consistent with this interpretation. (*Id.*, at 26–27.)

Plaintiff replies that Defendants’ proposed construction “is an attempt to import a limitation into the claim regarding how the binding is accomplished.” (Dkt. No. 85, at 9.)

At the January 29, 2019 hearing, the parties presented oral arguments as to this term.

(2) Analysis

As a threshold matter, the dictionary definitions of “bind” cited by Plaintiff do not pertain to the field of cryptography and are therefore unpersuasive. (See Dkt. No. 71, Ex. G, *Microsoft Press Computer Dictionary* 50–51 (3d ed. 1997) (BARKAN-00004279–80) (“To associate two pieces of information with one another. The term is most often used with reference to associating a symbol (such as the name of a variable) with some descriptive information (such as a memory address, a data type, or an actual value).”); see also *id.*, Ex. I, *IBM Dictionary of Computing* 64 (1994) (BARKAN-00004261).)

The disputed term appears in Claims 8 and 39 of the ’312 Patent, which recite (emphasis added):

8. A system for providing wireless access to a packet based data network comprising:

 a gateway to a packet-based data network comprising:

 a transceiver adapted to establish a radio frequency link with
 a mobile device;

 a connector to a packet based data network; and

 a connection regulator adapted to facilitate data flow
 between the mobile device and the packet-based data
 network;

 wherein said gateway is associated, with a *unique identity bound, to a cryptographic key*; and

 a coordination center adapted to communicate with said gateway via the packet based data network.

* * *

39. The system of claim 8 further comprising a plurality of gateways to the packet-based data network, with each respective gateway comprising:

 a transceiver adapted to establish a radio frequency link with one or more mobile devices;

 a connector to the packet-based data network;

 a connection regulator adapted to facilitate data flow between at least one respective mobile device and the packet-based data network; and

wherein the coordination center is adapted, to communicate with each respective gateway via the packet-based data network and each respective gateway is associated with a respective *unique identity bound to a cryptographic key*.

Plaintiff has cited disclosure in the specification that “[v]arious means may be used to achieve the unique identity of each add-on base station”:

A novel feature of the base station is a unique property in each device. This unique property may be stored, for example, in either the call controller 54 or the billing processor 55.

This unique property allows to use the base station as an add-on device. In prior art, each phone had an unique identity, however the base stations had no unique properties. Each base station in prior art was distinguished based on its fixed location and wiring; there were no distinguishing means in the base station itself.

In the novel approach according to the present invention, however, there are base stations that are add-on units to be added to a network by various persons or firms. The location of each such unit is not known a priori; its very existence has to be announced to the network. A base station with an unique identity allows the network to keep track of the addition of each new base station. The unique identity helps manage the expanding network.

Various means may be used to achieve the unique identity of each add-on base station. For example, an unique number may be stored in memory means in units 54 or 55. Alternately, a digital document may be stored therein. A smart card with an unique number or document may be inserted in the base station to activate it.

’284 Patent at 11:6–30 (emphasis added).

The disputed term, however, refers to a “unique identity *bound to a cryptographic key*” (not merely a “unique identity” in isolation). Defendants have cited disclosure regarding a “digital certificate” that binds a cryptographic key:

Each phone, base station and the cellular center 3 may have their own *digital certificate, which binds a cryptographic public key, with an identifier*.

The certificate may also contain information such as their phone number or identity. The extra information can also be included in other digitally signed digital documents.

In this way the packets of voice originating from the phone, can be encrypted by the destination public key to the other phone, ensuring privacy. They can also (or

alternatively) [be] signed by the originator's private key, to ensure authentication (and possibly non-repudiation).

'284 Patent at 8:9–20 (emphasis added).

This disclosure suggests that “binding” means something more than Plaintiff's suggestion of merely associating. The claims reinforce this distinction by reciting both “associated” and “bound,” thereby implying that those terms have different meanings. *See* '312 Patent at Cl. 39 (“each respective gateway is *associated* with a respective unique identity *bound* to a cryptographic key”) (emphasis added); *see also id.* at Cl. 8 (“said gateway is *associated*, with a unique identity *bound*, to a cryptographic key”) (emphasis added); *Innova/Pure Water*, 381 F.3d at 1119 (“when an applicant uses different terms in a claim it is permissible to infer that he intended his choice of different terms to reflect a differentiation in the meaning of those terms”).

Defendants have cited extrinsic evidence that cryptographic certificates can be issued by a “certificate authority”:

While public/private key encryption works to allow the distribution of encryption keys across insecure networks and the use of those keys to encrypt transmissions, there is still a problem of knowing if the public key that you have received when you connected to a server is really from the organization it claims to be from.

Perhaps you think you are connecting to www.amazon.com but a rogue computer intercepts your traffic, claiming to be www.amazon.com and giving you a public key to use for encryption. If your web browser trusts the key, it will use the rogue computer's public key to encrypt your banking information and send it to the rogue computer. Since the rogue computer gave you the public key, it also has the corresponding private key and is able to decrypt and abscond with your banking information.

So your computer needs to know who the key is actually coming from. This is achieved by sending you a public key that is digitally signed by a Certificate Authority (CA). When your computer or browser is initially installed, it knows about a number of well-known certificate authorities. If your browser is given a public key that is signed by one of the well-known certificate authorities, it trusts the key and uses it to encrypt and send your data. If your computer receives a public key that is not signed by one of its trusted certificate authorities, it will warn you before sending your data using the key.

(Dkt. No. 71, Ex. M, Charles R. Severance, *Introduction to Networking: How the Internet Works* 94–95 (BARKAN-0026553–54).) At the January 29, 2019 hearing, Defendants urged that a certificate authority is necessary for the general public to be able to use the claimed invention as disclosed in the specification. Defendants have also submitted the opinions of their expert in this regard. (See Dkt. No. 80-13, Dec. 21, 2018 Lanning Decl., at ¶¶ 75–77.)

Yet, the specification contains no disclosure of any certificate authority, let alone any disclosure that using a certificate authority is essential to the claimed invention. Thus, although the specification demonstrates that the disputed term uses “bound” to refer to the use of a certificate, Defendants have not shown any definition, disclaimer, or other evidence that would compel requiring a certificate authority.

The Court therefore hereby construes **“unique identity bound to a cryptographic key”** to mean **“unique identity and a cryptographic key associated with one another in a certificate.”**

O. “transmit recurrent updates”

Plaintiff’s Proposed Construction	Defendants’ Proposed Construction
No construction necessary; plain and ordinary meaning applies.	repeatedly send updates

(Dkt. No. 69, Ex. B, at 11; Dkt. No. 71, at 26; Dkt. No. 80, at 27; Dkt. No. 90-1, at 16.) The parties submit that this term appears in all Claims of the ’638 Patent. (Dkt. No. 69, Ex. B, at 11; Dkt. No. 90-1, at 17.)

Shortly before the start of the January 29, 2019 hearing, the Court provided the parties with the following preliminary construction: “repeatedly send updates.”

(1) The Parties' Positions

Plaintiff argues that this term “refers to the provision by the base stations of certain geographical and operational-status information to a coordination center.” (Dkt. No. 71, at 27.) Further, Plaintiff urges that “[j]urors will readily understand what it means for an update to be ‘recurrent.’” (*Id.*) Plaintiff argues that Defendants’ proposal of “repeatedly” should be rejected because “the specification is clear that the recurrent updates need not occur with any frequency.” (*Id.*)

Defendants respond that construction is appropriate to preclude Plaintiff from contending that this limitation could be satisfied by a single update. (Dkt. No. 80, at 27–28.)

Plaintiff replies that Defendants’ proposal of replacing “recurrent” with “repeated” should be rejected because it adds nothing beyond plain meaning. (Dkt. No. 85, at 10.)

At the January 29, 2019 hearing, Plaintiff and Defendants presented no oral arguments as to this term and instead rested on their briefing.

(2) Analysis

Plaintiff acknowledges that this term requires transmitting more than one update. (*See* Dkt. No. 71, at 27.) Defendants do not contend that their proposal requires a fixed interval between updates. (*See* Dkt. No. 80, Ex. 12, *The American Heritage Dictionary of the English Language* 1462 (4th ed. 2000) (SAMSUNG-0038714) (defining “recurrent” as “occurring or appearing again or repeatedly”).) Defendants’ proposed construction thus reflects the agreed-upon meaning of this term, and construction is appropriate to expressly reject any interpretation of the term that would encompass transmitting only a single update.

The Court accordingly hereby construes **“transmit recurrent updates”** to mean **“repeatedly send updates.”**

P. “recurrently issuing an operating license”

Plaintiff’s Proposed Construction	Defendants’ Proposed Construction
No construction necessary; plain and ordinary meaning applies.	repeatedly issuing a certificate or another digital document, to the effect that this phone/base station is part of my network and is in working order

(Dkt. No. 69, Ex. B, at 12; Dkt. No. 71, at 28; Dkt. No. 80, at 28; Dkt. No. 90-1, at 17.) The parties submit that this term appears in all Claims of the ’638 Patent. (Dkt. No. 69, Ex. B, at 12; Dkt. No. 90-1, at 17.)

Shortly before the start of the January 29, 2019 hearing, the Court provided the parties with the following preliminary construction: “repeatedly issuing an operating license.”

(1) The Parties’ Positions

Plaintiff argues: “Jurors will understand what it means for a device to be licensed to operate. That the license issuance *recurs* is likewise readily understandable to a jury.” (Dkt. No. 71, at 28.) Plaintiff also argues that Defendants’ proposal should be rejected because “[e]ven if it *were* proper to read exemplary specification terms into the claim (it is not), Defendants’ construction would fail because it misreads the specification.” (*Id.*)

Defendants respond that “the term ‘recurrently’ requires repeated instances of conduct.” (Dkt. No. 80, at 28.) Defendants further argue that the specification “teaches that an ‘operating license’ has two characteristics: (1) it is an actual document—e.g., a ‘certificate’ or other digital document, and not just an abstract concept like ‘permission’; and (2) it indicates to the rest of the communication system that the holder of the license is permitted to access the network.” (*Id.*, at 28–29.) Defendants urge that their proposed construction “accurately captures both of these aspects of what an ‘operating license’ is in the context of the claims and specification.” (*Id.*, at 29.)

Plaintiff replies that “[t]he passages [Defendants] cite define the term *certificate*, not *operating license*.” (Dkt. No. 85, at 10.)

At the January 29, 2019 hearing, Plaintiff and Defendants presented no oral arguments as to this term and instead rested on their briefing.

(2) Analysis

Claim 1 of the ’638 Patent, for example, recites in relevant part (emphasis added):

1. An add-on base station comprising:

 a transceiver adapted to establish a radio-frequency link with a mobile device;

 a first interface, separate from said transceiver, that is adapted for communication over the public Internet;

 a controller . . .

 wherein the add-on base station has transmission power lower than transmission power of conventional base stations and produces a cell smaller than macrocells of conventional base stations, and wherein the server system is adapted to authorize and de-authorize add-on base stations to route data to the remote gateway through the public Internet by *recurrently issuing an operating license* for the add-on base station.

The specification discloses:

The cellular center 3 can issue a certificate (an *operating license*) or another digital document, to the effect that ‘this phone/base station is part of my network and is in working order’ to all the devices connected thereto. The certificates may have a short expiration date, of 1 day for example.

This gives the center 3 control over the phones and base stations, that may be disconnected at short notice.

This allows a phone to ask the services of a base station only if it has an updated *operating license*. Similarly, a base station can verify that the phone is operating properly.

’284 Patent at 9:34–43 (emphasis added).

Defendants’ proposal includes specific features of this particular disclosed embodiment, but these features should not be imported into the claims in the absence of any showing of lexicography or disclaimer. No such showing has been made. *See, e.g., CCS Fitness, Inc. v.*

Brunswick Corp., 288 F.3d 1359, 1366 (Fed. Cir. 2002) (“[T]he claim term will not receive its ordinary meaning if the patentee acted as his own lexicographer and *clearly* set forth a definition of the disputed claim term in either the specification or prosecution history.”) (emphasis added).

Construction is nonetheless appropriate here, consistent with the construction of the above-addressed term “transmit recurrent updates,” to expressly reject any interpretation of the term that would encompass issuing only a single operating license.

The Court accordingly hereby construes “**recurrently issuing an operating license**” to mean “**repeatedly issuing an operating license.**”

Q. “adapted to”

Plaintiff’s Proposed Construction	Defendants’ Proposed Construction
No construction necessary; plain and ordinary meaning applies.	configured to

(Dkt. No. 69, Ex. B, at 12; Dkt. No. 71, at 29; Dkt. No. 80, at 29; Dkt. No. 90-1, at 18.) The parties submit that this term appears in Claims 1, 2, and 4–18 of the ’284 Patent, all Claims of the ’312 Patent, and all Claims of the ’638 Patent. (Dkt. No. 69, Ex. B, at 12; Dkt. No. 90-1, at 20.)

Shortly before the start of the January 29, 2019 hearing, the Court provided the parties with the following preliminary construction: “configured to.”

(1) The Parties’ Positions

Plaintiff submits that this term is used “to describe the operational capabilities of the claimed apparatuses—such as the base station controller.” (Dkt. No. 71, at 29.) Plaintiff argues that “[b]ecause the jury will understand what it means for the base stations to be ‘adapted to’ achieve that operational capability, there is no need to construe the term.” (*Id.*) Further, Plaintiff argues that “[t]here is nothing in the claim language or specification limiting ‘adapted to,’ or

otherwise indicating that the term bears anything other than its plain and ordinary meaning.” (*Id.*, at 29.)

Defendants respond by citing Federal Circuit precedents regarding “adapted” and by noting that Plaintiff previously alternatively proposed (in its P.R. 4-2 claim construction disclosures) that “adapted to” means “configured to.” (Dkt. No. 80, at 29–30.)

Plaintiff replies that “[t]he goal of [Defendants’] word substitution is to get a narrower scope to exclude devices ‘capable of’ performing recited functions and include those devices presently ‘configured’ to perform such functions.” (Dkt. No. 85, at 10.) Plaintiff argues that “Defendants’ construction fails because it lacks specification support.” (*Id.*)

At the January 29, 2019 hearing, the parties presented oral arguments as to this term.

(2) Analysis

Claim 1 of the ’284 Patent, for example, recites (emphasis added):

1. A gateway to a packet-based data network comprising:
 - a transceiver *adapted to* establish a radio-frequency link with a mobile device;
 - a first interface *adapted to* facilitate data flow between the mobile device and the packet-based data network; and
 - a controller *adapted to* regulate data flow between the mobile device and the data network based, at least partially, on information received over the data network from a coordination center, which center is connected to the data network through a second interface.

As another example, Claim 1 of the ’638 Patent recites in relevant part (emphasis added):

1. An add-on base station comprising:
 - a transceiver *adapted to* establish a radio-frequency link with a mobile device;
 - a first interface, separate from said transceiver, that is adapted for communication over the public Internet;
 - a controller *adapted to*:
 - ...
 - transmit recurrent updates regarding current operating parameters to a server of a server system via the public Internet, wherein the current operating parameters

include current geographical location data and the server system is *adapted to* identify the base station based on a unique property stored in a tamper-free unit of the add-on base station and to track the add-on base station based on the identification;

...

wherein the add-on base station has transmission power lower than transmission power of conventional base stations and produces a cell smaller than macrocells of conventional base stations, and wherein the server system is *adapted to* authorize and de-authorize add-on base stations to route data to the remote gateway through the public Internet by recurrently issuing an operating license for the add-on base station.

Plaintiff argues that “adapted to” could be interpreted as encompassing *potential* configuration rather than only *actual* configuration. Plaintiff cites the decision by the Federal Circuit in *Aspex Eyewear*, particularly the statement that “[i]n common parlance, the phrase ‘adapted to’ is frequently used to mean ‘made to,’ ‘designed to,’ or ‘configured to,’ but it can also be used in a broader sense to mean ‘capable of’ or ‘suitable for.’” *Aspex Eyewear, Inc. v. Marchon Eyewear, Inc.*, 672 F.3d 1335, 1349 (Fed. Cir. 2012). Plaintiff has cited no decision, however, in which the Federal Circuit has *construed* “adapted to” as encompassing mere capability, that is, the mere possibility of being appropriately configured.

On balance, Plaintiff’s arguments are unpersuasive, and construction is appropriate to preclude an overly broad reading of “adapted to.” *See Telemac Cellular Corp. v. Topp Telecom, Inc.*, 247 F.3d 1316, 1330 (Fed. Cir. 2001) (“[T]hat a device is capable of being modified to operate in an infringing manner is not sufficient, by itself, to support a finding of infringement.”); *see also Aspex Eyewear*, 672 F.3d at 1349 (“Amended claim 23 refers to the arms and magnetic members as ‘adapted to extend across respective side portions’ of a primary frame. In that context, the phrase ‘adapted to’ is most naturally understood to mean that the arms and magnetic members are

designed or configured to accomplish the specified objective, not simply that they can be made to serve that purpose.”); *In re Giannelli*, 739 F.3d 1375, 1379 (Fed. Cir. 2014).¹⁹

Plaintiff has cited *Profectus Technology, LLC v. Huawei Technologies Co., Ltd.*, No. 6:11-CV-474, 2014 WL 1575719, at *8 (E.D. Tex. Apr. 17, 2014), in which the Court found that the phrase “adapted to” (as part of a larger disputed term) did not require construction. In *Profectus*, the parties did not dispute whether “adapted to” encompassed mere capability rather than actual configuration. *Profectus* is therefore distinguishable. Here, construction is appropriate to resolve the particular dispute raised by the parties in the present case.

The Court accordingly hereby construes **“adapted to”** to mean **“configured to.”**

V. CONCLUSION

The Court adopts the constructions set forth in this opinion for the disputed terms of the patent-in-suit, and in reaching conclusions the Court has considered extrinsic evidence. The Court’s constructions thus include subsidiary findings of fact based upon the extrinsic evidence presented by the parties in these claim construction proceedings. *See Teva*, 135 S. Ct. at 841.

The parties are ordered that they may not refer, directly or indirectly, to each other’s claim construction positions in the presence of the jury. Likewise, the parties are ordered to refrain from mentioning any portion of this opinion, other than the actual definitions adopted by the Court, in

¹⁹ Defendants are proposing the same construction that Plaintiff alternatively proposed in its P.R. 4-2 disclosures. (Dkt. No. 80, Ex. 11, Plaintiff’s Preliminary Claim Constructions and Extrinsic Evidence, at 9.) Defendants have not shown that Plaintiff is necessarily bound by this prior proposal, but it is nonetheless noteworthy that Plaintiff alternatively proposed “configured to” rather than, for example, “configurable to.”

the presence of the jury. Any reference to claim construction proceedings is limited to informing the jury of the definitions adopted by the Court.

SIGNED this 7th day of February, 2019.



ROY S. PAYNE
UNITED STATES MAGISTRATE JUDGE